Department of Transportation Services

Paratransit Growth Management Study

May 2017

Prepared by

Innovative Paradigms
Building Mobility Partnerships
a division of paratransit inc.

In conjunction with

NELSON
NYGAARD

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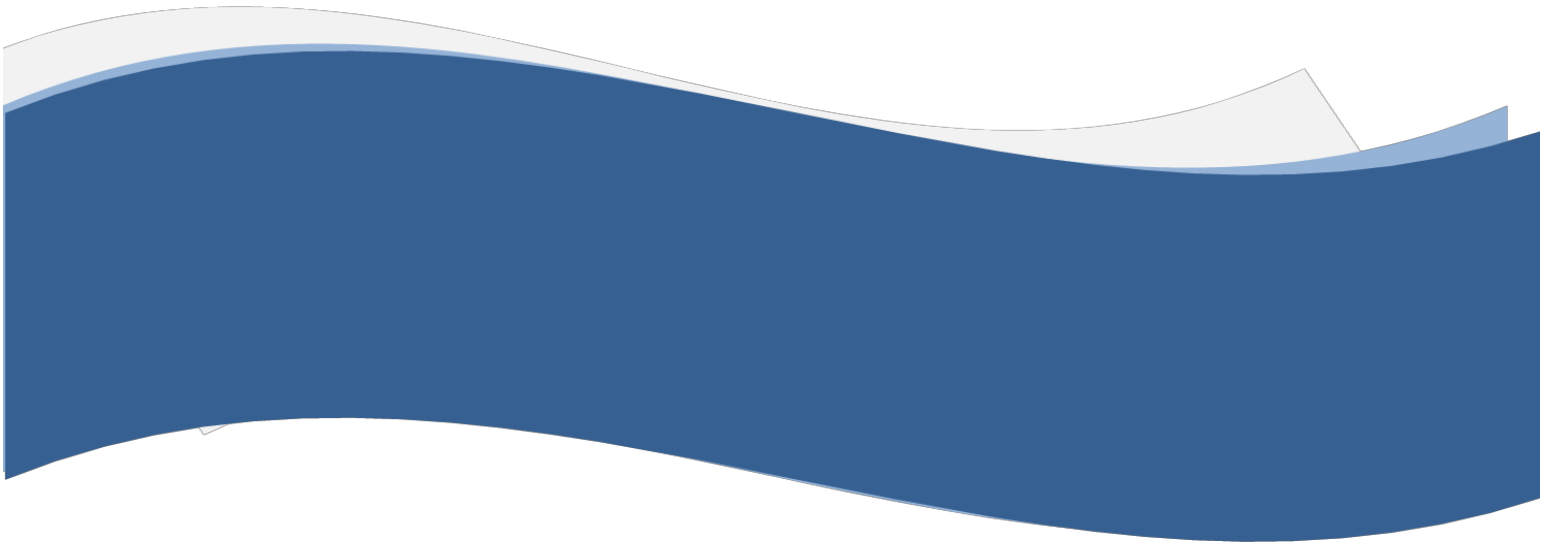

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Executive Summary

The goal of the Paratransit Growth Management Study is to ensure the sustainability of the paratransit service, in full compliance with FTA ADA paratransit regulations.

Introduction

The City and County of Honolulu (City), as a public operator of transit services, is required by the Americans with Disabilities Act (ADA) to provide complementary paratransit services for people who, due to a disability, are unable to use TheBus for some or all of their trips. The goal of the Paratransit Growth Management Study (PGMS) is to ensure the sustainability of the paratransit service, in full compliance with Federal Transit Administration (FTA) and ADA paratransit regulations.

Because of the very high use of paratransit services in Honolulu, the City faces critical choices as to how to address this growing need. In early 2015, the City engaged Innovative Paradigms to conduct a study of operational issues facing paratransit services in Honolulu. The PGMS presents a range of policy and investment choices with their projected impacts that are designed to achieve the goal and objectives as determined by the City.

The PGMS also addresses many of the findings presented in the *Audit of City's Paratransit Service, March, 2016* and offers strategies to deal with findings in the audit. The major audit subject areas and responsible agencies follow:

- ADA Compliance
  - Subscription service policies and service levels
  - Service in excess of ADA requirements
- Oahu Transit Services, Inc. (OTS) Actions
  - Establish performance benchmarks
  - Develop plan to mitigate excessive trip times
  - Manage and expand taxi based resources to supplement operations
- City Department of Transportation Services (DTS) Actions
  - Improve oversight of OTS including development of this Growth Management Study
  - Establish a tiered fare structure that includes rates for premium services
- City Council Actions
  - Increase paratransit fares
  - Separate paratransit and fixed-route operations

Growth in Demand

In 2015, the City Department of Transportation Services (DTS) contracted with Nelson\Nygaard and its nationally recognized expert in paratransit demand forecasting to project growth in the demand for paratransit services under various scenarios for the five-year study period (2018 through 2022). The analysis process confirmed what has been evident in recent years: the growth in demand for TheHandi-Van and related services is increasing at a disquieting rate. Since 2011, demand has grown by approximately 3% per year above what would have been projected based upon population growth alone. ***The very high demand for paratransit service in Honolulu results in it being the highest per capita level of paratransit demand among large paratransit providers in the United States***[1]***.*** Between 2001 and 2008, trip demand grew between 3% and 5% per year. Starting in 2009, the demand curve began a further upward trend, with trips growing 5% to 6% per year through 2015. In comparison, during 2009-2015, trips provided on TheBus fixed-route service rose slightly, then declined and leveled off.

The Nelson\Nygaard analysis established a baseline, or "status quo," projection of demand that assumes no offsetting policy or service changes. This projection uses actual trip-making rates from TheHandi-Van service between 2011 and 2016, combined with population data from the Hawaii Department of Business, Economic Development and Tourism (DBEDT). The volume of annual trips projected begins with 1,243,000 in 2016, and grows to 1,587,000 in 2022. The increase each year is between 50,000 and 60,000 trips over the previous year. This represents a growth rate of approximately 4% per year, continuing the trend begun in 2009.

In addition to the "Status Quo" scenario, the Nelson\Nygaard analysis considered three other major policy alternatives for dealing with the demand growth. Extensive technical analysis and expert demand forecasting resulted in the consideration of the four service delivery scenarios that are directed at attaining ADA compliance while also ensuring the sustainability of the paratransit service. *In balancing the alternative approaches, the PGMS recommends that the Fare Increase and Improved On-Time Performance Scenario be adopted by the City and used as a guide to future paratransit decision-making.*

Fare Increase and Improved On-Time Performance projects the impact on future service levels if both a fare increase and improved on-time performance measures are implemented. One of the most significant growth management strategies used by major transit agencies nationwide is to raise fares. Industry evidence shows that fare increases have the two-fold effect of: 1) reducing demand for service in and 2) increasing revenue. The current $2.00 fare for TheHandi-Van, which is one of the lowest in the nation, has not been increased since 2001. The ADA regulations allow for a complementary paratransit fare to be as high as twice the regular fixed-route fare ($5.00 with the current TheBus fare). The combination of a fare increase with improved on-time performance tempers a dramatic increase in demand from improved on-time performance with an offsetting decrease in demand from a fare increase. The fare increase would be initiated in FY2018 with

[1] Based on NTD 2015 Demand Response (Van and Taxi) Ridership and service area population statistics

fares raised in increments from the present $2.00 per trip to $4.00 per trip by the end of the five-year study period.

Status Quo (Do nothing) projects the impact on future service levels if no major policy actions are taken to mitigate the natural growth rate in demand for paratransit service. The FTA measures paratransit compliance by evaluating ADA-mandated measures including trip denials and on-time performance. While the FTA has never determined the TheHandi-Van to be non-compliant, by maintaining the status quo with unrestricted growth in future years, TheHandi-Van could face performance issues that lead to non-compliance.

Fare Increase projects the impact on future service levels if the only change is an increase in TheHandi-Van fares. Both the Fare Increase and the Fare Increase and Improved On-Time Performance scenarios project the impact on paratransit demand if a general fare increase is initiated in 2018 and is raised in increments from the present $2.00 per trip to $4.00 per trip by the end of the five-year study period.

Improved On-Time Performance projects the impact on future service levels if the only change is an improvement in on-time performance of The Handi-Van. Industry data shows that as on-time performance of the system improves, demand for the service increases. Demand for TheHandi-Van service is currently kept in check by an on-time performance record that, while compliant with ADA regulations, is below the City's adopted standards.

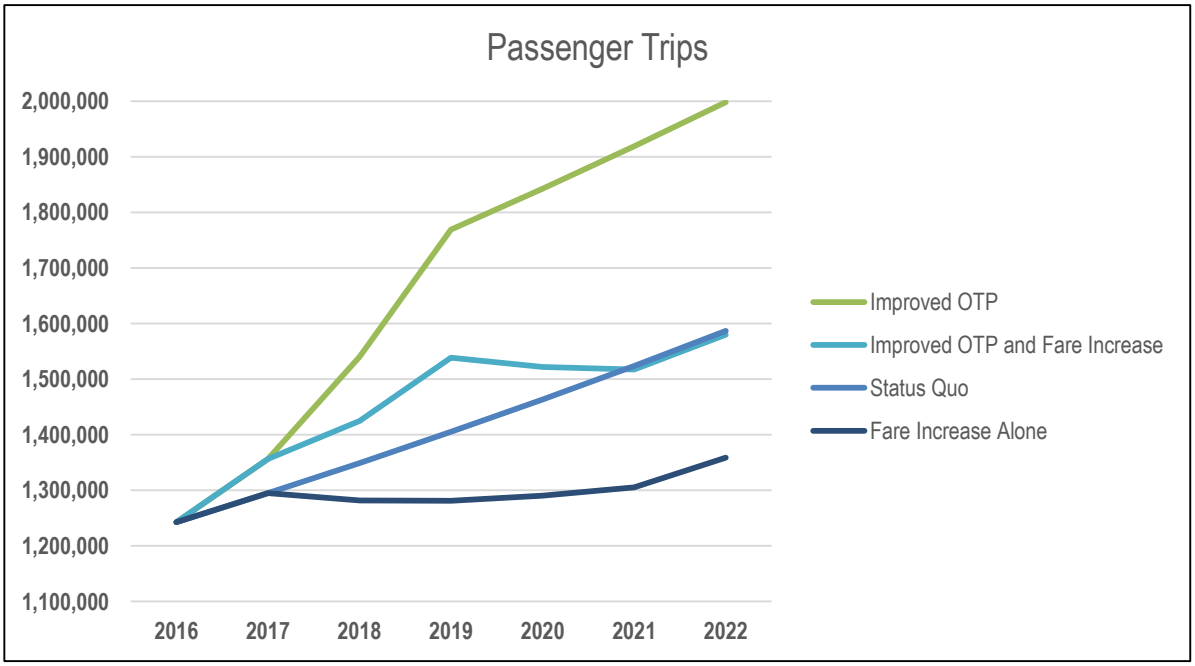
For each of the four scenarios, Figures ES1 and ES2 below show the projected boardings for TheHandi-Van, taxis, and agency provided trips in years FY2018 to FY2022, based on an analysis of actual data from FY2016.

Figure ES1 Ridership Projections by Scenario

Passenger Trips Handi-Van, Taxi, Agency Provided	**Actual**	**Projections**				
SCENARIO	**FY2016**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
Fare Increase and Improved OTP[1]	1,243,000	1,425,000	1,538,000	1,522,000	1,517,000	1,580,000
Status Quo	1,243,000	1,349,000	1,405,000	1,463,000	1,524,000	1,587,000
Fare Increase	1,243,000	1,281,000	1,281,000	1,290,000	1,305,000	1,359,000
Improved OTP[1]	1,243,000	1,540,000	1,769,000	1,843,000	1,919,000	1,998,000

Source: Nelson\Nygaard
[1]OTP On-Time Performance

Figure ES2 Effect of Scenarios on Ridership



Source: Nelson\Nygaard

The PGMS includes service delivery approaches directed at each of the four scenarios. For presentation purposes, the service delivery approaches are divided into two major categories: The Core Service Elements that address the bulk of demand, and Additional Service Elements that have a smaller impact on overall demand but are emerging as "best practice" strategies throughout the nation and in combination can have a measureable impact.

Core Service Elements

The Core Service Elements of the PGMS consist of the three major service delivery components currently applied in Honolulu, each of which is characterized by its own service and cost factors:

1. ***TheHandi-Van*** handles the majority of paratransit demand trips. It also transports the greatest overall number of eligible clients, at over 3,500 trips per day in FY2016. The average cost per one-way trip for TheHandi-Van for FY2016 is $45.39. This figure is derived from data in FY2016 OTS Financial Statements and TheHandi-Van Monthly Performance Report, June 2016.

2. ***Supplemental Providers*** are the taxi and other private transportation companies that carry passengers scheduled through TheHandi-Van and assigned out to them. The use of these companies has grown dramatically in recent years. Among the major reasons for this growth are the:
    - Availability of the capacity within their systems to expand
    - Cost per one-way trip by Supplemental Providers (FY2016 $23.33) is far less than TheHandi-Van.

Supplemental trips are provided primarily to ambulatory customers and tend to be shorter than trips provided by TheHandi-Van, which affects the cost per trip. The cost per trip of $23.33 is derived from FY2016 OTS Financial Statements and TheHandi-Van Monthly Performance Report, June 2016.

As of June 30, 2016, transportation by Supplemental Providers averages approximately 650 trips per day. The single greatest limitation of Supplemental Providers is the lack of wheelchair lift-equipped vehicles. With few lift-equipped vehicles in their systems, Supplemental Providers are largely limited to transporting passengers who are primarily ambulatory.

3. ***Agency-Provided Trips*** refers to human service agencies that transport their own ADA paratransit eligible clients to daily programs. Agencies currently operating such service are Goodwill Industries of Hawaii (Goodwill), Special Education Center of Hawaii (SECOH), and The Arc in Hawaii (The Arc). In combination, these organizations provide approximately 660 trips per weekday or about 13% of total paratransit trips for the year. Because these agencies serve only their own ADA clients, they can provide service very efficiently and greatly reduce peak hour demand for TheHandi-Van. The cost-effectiveness of the Agency Providers is the greatest of all of the Core Service Elements. The average cost per trip by Agency Providers for FY2016 is $8.78, substantially less than either TheHandi-Van or Supplemental Providers. This figure is derived from FY2016 agency invoices submitted to the City.

Additional Service Elements

As noted above, the three Core Service Elements (TheHandi-Van, Supplemental Providers, and Human Services Agency Providers) account for the vast majority of paratransit trips and have the greatest impact in servicing overall demand. Thus, the service expansion in the PGMS primarily focuses on these Core Elements. However, additional elements that reflect national best practices are suggested in the PGMS below:

1. ***Promote use of TheBus by Persons with Disabilities*** is a national best practice that includes greater emphasis on the use of fixed-route services as an alternate to paratransit for those who can ride a regular, accessible vehicle. TheBus is a fully-accessible transit system that includes all federally-required features to make the system usable for most individuals with disabilities. These features include wheelchair lifts, kneeling features, and stop announcements. The PGMS proposes a package of programs including travel training to teach persons with disabilities to use TheBus, greater emphasis on public information programs to encourage bus riding, and eventual introduction of trip-by-trip ride selection as a result of conditional status resulting from the eligibility determination process.

2. ***Taxi Voucher Programs*** have been implemented in many communities and are being considered in many more as a means of encouraging ADA-eligible individuals to schedule their own taxi rides as an alternative to the traditional paratransit system such as TheHandi-Van. These programs allow riders to schedule their own same-day trips rather than preschedule trips on their ADA paratransit service. Typically, the taxi voucher is subsidized by 50% or more of its face value by the transit agency. The rider purchases the subsidized voucher and uses it to pay meter fare to the taxi. Such a system is typically far less expensive than traditional paratransit and relieves the agency of the burden of scheduling. This Study recommends further analysis of taxi voucher programs with the possible implementation of a pilot program during the five-year study period.

3. ***Organizational Restructuring*** can result in increased efficiency and performance of an overall paratransit system (including the three Core Elements). Ultimately, the organizational structure chosen for the management of the Agency Trips program will affect the ability to expand this vital Core Element. Because it is the least expensive of all of the service delivery components, it is one of the most feasible targets for growth. Yet because human service agencies are typically not transportation specialists, they benefit from management assistance from an outside source, which is necessary to support an expanding structure. The PGMS explores the expansion of DTS as the focal point of such support or alternately the creation of a separate management structure with the sole responsibility of managing the growing Agency Trips program.

ADA Compliance Indicators: On-Time Performance (OTP)

Compliance with the ADA is measured by a number of statistical indicators including trip length, trip purpose, level of trip denials, on-time performance, etc. As a representative measure of compliance with ADA regulations, the factor used by Nelson\Nygaard in its statistical forecasting process for the PGMS is on-time performance. Typically on-time performance is represented in terms of an “effective window.” As defined by Nelson\Nygaard, the effective window is a period of time during which a rider can generally count on being picked up. This could be thought of as “so many minutes before the scheduled time to so many minutes after” or just “so many minutes after the scheduled time.” Either way, the rider experience is more or less the same.

For the purposes of this Study, the factor used in evaluating the degree of compliance attained by each Scenario is its achievement of a level of on-time performance that meets the ADA. Overall compliance is discussed with each Scenario below.

PGMS Scenarios

The demand projections prepared for the PGMS present a very challenging picture in order for the City's paratransit program to achieve lasting sustainability and compliance with the ADA. For example, while the Improved On-Time Performance Scenario would ensure full ADA compliance as measured in part by on-time performance, the projected resulting demand for service would be huge and would require an enormous financial investment by the City that would be difficult to sustain. Thus, demand management strategies must be considered in order to mitigate an otherwise extraordinary increase in the cost of paratransit service. Two of the four Scenarios suggest a fare increase as the key demand management strategy. Maintaining compliance with service quality standards can then be accomplished with the adjustment of various factors in service delivery and in creative approaches to the overall service mix. The PGMS scenarios define the various service elements that are proposed to address the demand projection for that scenario.

Fare Increase and Improved On-Time Performance Scenario

Under the Fare Increase and Improved On-Time Performance Scenario, full ADA compliance would continue to be achieved due to heavy investment in service improvements. However, the dramatic increase in projected demand would be balanced by a fare increase. The combination of these approaches would result in a small increase in demand over the Status Quo Scenario and would be dramatically lower than under the Improved On-Time Performance Scenario alone. Its key features are listed below:

- Increase in fares in $.50 increments to $4.00 during the five-year study period.
- Improvement in on-time performance from an effective service delivery window in 2016 of 45 minutes, as reported by Nelson\Nygaard, down to an effective window of 30 minutes in FY2019. This results in a significant increase in the volume of trips provided.
- Projected total increase in overall demand of over 11% between FY2018 and FY2022.
- Core Service Elements:
    - Moderate increases in TheHandi-Van budget once the fare increase is introduced. The fare increase serves to temper the demand growth curve while realizing significant improvement in on-time performance.
    - No increase in the use of Supplemental Providers. While policy changes that could influence expansion of such Providers are being considered, there are existing capacity limitations. These limitations relate to availability of taxi or Transportation Networking Companies (TNCs) during times of greatest paratransit demand and also, very importantly, limitations on accessible vehicle capacity in the taxi/TNC fleets.
    - Substantial increase in the use of Agency-Provided Trips.
- ADA compliance: Continued compliance as measured in part by on-time performance.
- Additional Service Elements (proposed for all Scenarios)
    - Promote Use of TheBus

- Use of Conditional Eligibility to redirect trips: TheHandi-Van eligibility process results in some applicants being classified as conditionally eligible, which means they are able to use TheBus for some of their trips.

Status Quo (Do Nothing) Scenario

This Scenario does not include any significant new policies to mitigate the demand growth. The Status Quo Scenario projects an increase in overall demand of approximately 4% per year or a total increase of over 18% between FY2018 and FY2022. It does not include any proposed fare increase above the current $2.00 TheHandi-Van fare during the five-year study horizon. The major elements of this Scenario are:

- No increase in fares.
- No improvement in on-time performance.
- Projected demand increase of over 18% between FY2018 and FY2022.
- Core Service Elements:
  - Some increase in TheHandi-Van service to accommodate a portion of the increase in trips.
  - No increase in the use of Supplemental Providers.
  - Substantial increase in the use of Agency Trips to accommodate most of the increase in trip demand.
- ADA Compliance: No improvement in on-time performance as it would simply meet growth in demand without improvement of the overall service level.
- Additional Service Elements, as shown in the Fare Increase and Improved On-Time Performance Scenario.

Fare Increase Scenario

The introduction of a fare increase in conjunction with the various other service delivery mix options associated with the Status Quo Scenario would result in a ***dramatic reduction*** in overall paratransit demand. As with the “Fare Increase and Improved On-Time Performance” scenario, the Fare Increase Scenario calls for raising the current $2.00 fare to $4.00 during the five-year study period beginning in FY2018. Nationally, many transit agencies are adopting such a phased approach to any fare increases as a matter of routine policy rather than introducing them on an *ad hoc* basis at odd intervals. This fare increase approach deals with all implications at one time as a matter of policy then spreads the actual increases over a period of time.

The Fare Increase Scenario does not address the on-time performance issue and presumes that no major investment is made in improving the overall quality of service. The combined effect of these two decisions (increasing fares, not addressing on-time performance) would be an increase in demand of only 6% between FY2018 and FY2022. It is by far the most aggressive of the alternative scenarios. Its major features are:

- Increase in fares in $.50 increments to $4.00.
- No improvement in on-time performance.
- Projected total increase in overall demand of 6% between FY2018 and FY2022.
- Containment of overall costs at near existing levels.
- Core Service Elements:
    - Containment of TheHandi-Van service at approximately existing levels.
    - No increase in the use of Supplemental Providers.
    - Substantial increase in the use of Agency Trips.
- ADA Compliance: The reduction in demand associated with a fare increase would, by reduced demand, allow for easier achievement of on-time and trip length expectations. These would contribute to maintaining overall compliance.
- Additional Service Elements, as shown in the Fare Increase and Improved On-Time Performance Scenario.

Improved On-Time Performance Scenario

The Improved On-Time Performance Scenario is the most ***dramatic expansion*** alternative. It assumes that there would be no introduction of significant demand management strategies, particularly a fare increase. Instead, it is based upon heavy investment in improved service in an effort to attain full ADA compliance as measured in part by on-time performance. The projected result of this approach would be a dramatic increase in demand for paratransit service. In the period between FY2018 and FY2022, an overall increase in paratransit demand of 30% is projected. This level of increase in demand would require the greatest increase in total investment. A summary of key factors in this scenario follows:

- No increase in fares.
- Improvement in on-time performance from an effective service delivery window in FY2016 of 45 minutes down to an effective window in FY2019 of 30 minutes. As described earlier, the effective window (typically 30 minutes) is the period of time during which the rider generally expects to be picked up.
- Projected total increase in overall demand of 30% between FY2018 and FY2022.
- Core Service Elements:
    - Dramatic increase in the size and budget of TheHandi-Van program.
    - No increase in the use of Supplemental Providers.
    - Substantial increase in the use of Agency-Provided Trips.
- ADA Compliance: Ensured attainment of full ADA compliance as measured by on-time performance.
- Additional Service Elements, as shown in the Fare Increase and Improved On-Time Performance Scenario.

The Figure ES3 summarizes and compares the most significant measures associated with each Scenario.

Figure ES3 Summary Comparison All Scenarios

	Base	Projections				
ALL MODES	**FY2016[1]**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
FARE INCREASE & IMPROVED ON-TIME PERFORMANCE						
Fare	$2.00	$2.50	$3.00	$3.50	$4.00	$4.00
Trips	1,242,798	1,424,596	1,538,301	1,521,996	1,517,071	1,579,682
Service Hours	651,152	704,387	769,133	752,292	741,894	773,777
Operating Cost	$46,284,364	$52,259,840	$58,756,124	$59,046,760	$59,724,694	$64,008,917
Fleet Size	180	187	207	207	207	207
Capital Cost (Vehicles)[2]	$4,283,480	$4,602,566	$0	$4,851,978	$4,997,538	$5,445,881
STATUS QUO						
Fare	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
Trips	1,242,798	1,348,876	1,404,994	1,463,265	1,523,838	1,586,729
Service Hours	651,152	657,055	685,802	715,579	746,124	778,181
Operating Cost	$46,284,364	$48,616,289	$52,149,130	$56,048,601	$60,080,487	$64,390,543
Fleet Size	180	186	186	189	197	207
Capital Cost (Vehicles)[2]	$4,283,480	$2,242,276	$364,665	$5,853,591	$6,287,114	$5,711,534
FARE INCREASE						
Fare	$2.00	$2.50	$3.00	$3.50	$4.00	$4.00
Trips	1,242,798	1,281,432	1,281,355	1,290,015	1,305,033	1,358,893
Service Hours	651,152	614,896	608,515	607,281	609,349	635,761
Operating Cost	$46,284,364	$45,370,990	$46,021,289	$47,204,328	$48,575,564	$52,051,372
Fleet Size	180	161	155	155	155	160
Capital Cost (Vehicles)[2]	$4,283,480	$1,534,189	$0	$4,851,978	$5,642,326	$5,445,881
IMPROVED ON-TIME PERFORMANCE						
Fare	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
Trips	1,242,798	1,540,104	1,769,179	1,842,554	1,918,828	1,998,020
Service Hours	651,152	776,591	913,454	952,673	993,032	1,035,279
Operating Cost	$46,284,364	$57,817,925	$70,198,951	$75,410,985	$80,849,302	$86,665,251
Fleet Size	180	210	254	265	277	290
Capital Cost (Vehicles)[2]	$4,283,480	$7,434,915	$1,337,104	$6,354,398	$6,673,987	$5,844,361

Source: Nelson\Nygaard and Innovative Paradigms
Base Year FY2016[1] FY2016 actual data used as base year for projections FY2018 – FY2022
Capital Cost[2] Amount required for vehicle procurement

Additional PGMS Considerations

Several other factors are considered in the PGMS, some of which may be significant relative to the overall cost of the program. Others, that involve features that require study beyond that possible in the context of this Study, are listed below in no particular order:

- *Facility expansion requirements:* Three of the four scenarios require serious consideration of future vehicle storage, maintenance, and administrative expansion. According to OTS, the current maximum capacity that can be supported by existing facilities is 205 vehicles. The Status Quo Scenario projects a Handi-Van fleet size of 207 vehicles by Year Five of the Study. This is a number greater than can be accommodated at OTS. The On-Time Improvement scenario requires larger facilities with a total Year Five fleet size of 290. Only the Fare Increase scenario requires no increase in fleet size. Should any scenario other than the Fare Increase be chosen, a study of facility expansion options should be initiated soon after adoption of the PGMS.

- *Supplemental Provider issues:* Greater study than allowed in the PGMS should be undertaken to assess options for the expansion of the accessible fleet for Supplemental Providers. Whether direct public investment or incentives for private investment by provider companies, a means should be identified to stimulate expansion of the accessible supplemental fleet.

- *Agency-Provided Trips Expansion:* The use of human service agencies to provide their own trips has been well documented in Honolulu since 2011 and is by far the most cost-effective method of service delivery for ADA riders who attend day programs. However, the application of many federal transportation regulations to human service agencies can introduce operational challenges for agencies that could limit expansion. Refinements to the management of the Agency-Provided Trips program could stimulate expansion by providing technical support and further refining the level of the service delivery.

Extensive technical analysis and expert demand forecasting resulted in the consideration of four service delivery scenarios that are directed at ensuring the sustainability of the City's paratransit service while maintaining ADA compliance. In examining the various alternatives to achieving the goal of this plan, the ***Fare Increase and Improved On-Time Performance Scenario*** *represents a balanced approach to achieving both sustainability and compliance with ADA FTA requirements.*

The following pages present a comprehensive list of recommendations that address the issues in the PGMS.

Recommendations: Operations and Policy Strategies

MANAGE DEMAND TO ENSURE SERVICE AVAILABILITY		
Category	***Operations/Policy***	***Cost/Effect***
ADA Eligibility	Continue In-Person eligibility to ensure accurate determinations, including the implementation of conditional eligibility.	**Cost:** Covered through current Eligibility Center contract ($1.15 million/year) Part of Demand Management
ADA Eligibility	Study future implementation of expanded use of trip-by-trip eligibility for when resources are available.	**Cost:** For additional staff to manage trip-by-trip service unknown at this time. Possible future cost savings as more expensive paratransit trips can be diverted to fixed-route when ADA-eligible riders use TheBus.
Fares	Implement an increase in the general TheHandi-Van fare in $0.50 increments over a five-year period beginning in 2018.	**Cost:** None; increases fare revenue Key component of Demand Management Strategies. Reduce financial incentive to use paratransit instead of fixed route service. Policy of incremental increases follows national trends.
Fares	Establish paratransit minimum farebox recovery ratio.	**Cost:** Not quantifiable at this time Possible future cost savings
Fares	Continue evaluation of premium fares for Medicaid-funded agency trips.	**Cost:** Not quantifiable at this time Possible future cost savings
Fares	Continue discussions with State and Federal agencies regarding Medicaid-funded transportation programs, seek revised funding and cost distribution formula for additional Medicaid funding to Hawaii to support eligible trips.	**Cost:** Not quantifiable at this time Possible future cost savings
Capacity	Use lower-cost providers to the extent possible, including agency and third-party operators.	**Cost:** Not quantifiable at this time Possible future cost savings
Capacity	Continue to evaluate Supplemental Provider capacity through the Study horizon with special attention to methods to increase the number of accessible vehicles in the fleet.	**Cost:** Not quantifiable at this time Possible future cost savings and increase in system capacity

Recommendations: Operations and Policy Strategies

MANAGE DEMAND TO ENSURE SERVICE AVAILABILITY		
Category	***Operations/Policy***	***Cost/Effect***
Taxi Voucher	Conduct a feasibility study to implement a pilot program during the Study horizon. Determine the pilot program size based upon available City funds to support the project. Consider administrative support requirements.	**Cost:** estimate $10,000 Possible future cost saving from paratransit trips deferred to lower-cost taxis.
Taxi Voucher	Establish a pilot project to test the impact of a taxi voucher program on overall ADA paratransit demand by encouraging same-day trips.	**Cost:** estimated $100,000 for 1 year pilot project Possible future cost savings as more expensive same-day paratransit trips can be diverted to lower-cost taxi service.
Promote TheBus	Promote accessible and affordable features of TheBus to defer use of paratransit and encourage riders to select the most appropriate transit mode (fixed-route or paratransit) for each trip.	**Cost:** Not quantifiable at this time. Some costs covered through current Eligibility Center contract. Possible future cost savings. Improved service quality, better alignment of demand with appropriate mode. Reduces paratransit demand by moving trips to TheBus. Aligns Demand Management with national trends by offering additional customer mobility options
Promote TheBus	Refine public information tools (e.g., public information distributed through the TheHandi-Van Eligibility Center, expanded promotion of web-based tools for trip planning) to encourage use of TheBus by disabled individuals as an alternative to ADA paratransit.	**Cost:** Not quantifiable at this time Possible future cost savings
Promote TheBus	Expand travel training program with particular emphasis on high school students transitioning to use of public transit options.	**Cost:** Increase annual direct program expenditure from approximately $60,000 per year to as much as $80,000 in future years. Possible future cost savings; Expanded program calls for 10 trained individuals per month; assuming even limited use of TheBus instead of TheHandi-Van, “avoided” cost for TheHandi-Van service could total over $800,000 per year once 120 Handi-Van riders have been trained.

Recommendations: Operations and Policy Strategies

ALIGN CAPACITY WITH PROJECTED DEMAND IN A COST-EFFECTIVE MANNER: ASSETS		
Category	***Operations/Policy***	***Cost/Effect***
Fleet	Implement the fleet management plan in the PGMS based upon a 7 year/250,000 mile replacement program for cutaway vehicles.	**Cost:** Varies Following consistent vehicle replacement guidelines and timely procurement of expansion and replacement vehicles will help to ensure fleet availability and improve on-time performance.
Fleet	Determine an appropriate mix of vehicle types to provide sufficient flexibility and capacity to meet riders' diverse service requirements	**Cost:** In the Fare Increase and Improved On-Time-Performance Scenario, proposed additional vehicles delivered in 2019 cost $4.6 million; future costs based upon fleet replacement plus expansion Possible future cost saving. More efficient operations.
Fleet	Maintain fleet size at a level that can effectively meet current and projected demand	**Cost:** In the Fare Increase and Improved On-Time-Performance Scenario, vehicle costs range up to $5.4 million per year through the Study years to maintain the fleet Possible future cost saving. More efficient operations
Facility	Ensure facilities are appropriately located and adequately equipped to support operations, in light of travel patterns and urban growth	**Cost:** Cost estimate pending a future paratransit facility planning study that will include design and engineering Reduction in operating cost due to reduced vehicle deadheading Improved on-time performance
Facility	Initiate a paratransit facility planning study to prepare for eventual expansion of TheHandi-Van fleet	**Cost:** Study cost: $100,000 to $200,000 Possible future cost saving. More efficient operations
Facility	Initiate a planning study for a new, remotely-located TheHandi-Van vehicle storage, fueling and washing facility	**Cost:** To be determined Adding a new TheHandi-Van facility could have a significant impact on deadheading cost depending upon location; including fueling and washing at such a site would introduce further efficiencies

Recommendations: Operations and Policy Strategies

ALIGN CAPACITY WITH PROJECTED DEMAND IN A COST-EFFECTIVE MANNER: OPERATIONS		
Category	***Operations/Policy***	***Cost/Effect***
Operations	Expand the support structure at OTS to support projected growth. Ensure adequate staffing levels.	**Cost:** To be determined More efficient operations.
Operations	Ensure management and contractual relationships are structured in an effective manner.	**Cost:** No new cost Possible future cost saving. More efficient operations, better management oversight, improved compliance
Operations	Study separating TheHandi-Van management from TheBus.	**Cost:** Not quantifiable at this time Potential restructuring of paratransit service delivery with possible cost control implications and service improvements. Could align with national trends in service deployment.
Operations	OTS to hire a Trapeze Specialist, with current high-level Trapeze expertise.	**Cost:** $120,000 Year 1, wages and benefits Improved scheduling efficiency
Operation	OTS to hire or assign a fulltime Subscription Trip Manager.	**Cost:** $90,000 Year 1, wages and benefits Improved efficiency of Subscription Services
Operations	DTS to hire a Transportation Analyst, with emphasis on rider trends and alternative service scenarios.	**Cost:** $105,000 Year 1, wages and benefits Improved scheduling efficiency and on-time performance; improved use by OTS staff of scheduling tools

Recommendations: Operations and Policy Strategies

ALIGN CAPACITY WITH PROJECTED DEMAND IN A COST-EFFECTIVE MANNER: OPERATIONS		
Category	***Operations/Policy***	***Cost/Effect***
Operation	Update Subscription Services template; Subscription Trip Manager to keep template up-to-date.	**Cost:** Unknown Improved management of Subscription Services
Operation	Train new in-house staff to proficiency in the use of the Trapeze scheduling system and other supporting technologies; update training for all staff periodically; enforce complete use of scheduling tools throughout all levels of operations staff.	**Cost:** Unknown Increased efficiency and better customer service
Operation	Reinitiate full utilization of the Trapeze software for real-time scheduling.	**Cost:** Not quantifiable Improved scheduling efficiency and on-time performance
Operation	Strengthen the agreements between OTS and supplemental providers.	**Cost:** Not quantified. Possible future cost savings More consistent trip deployment.
Operation	Develop Management Plan for Agency Trips Program.	**Cost:** No additional funds required: develop under existing mobility management contract. DTS to continue to serve in Mobility Management role. Potential restructuring of paratransit service delivery with possible cost and service improvements. Could align with national trends in service deployment.
Operation	Analyze cost/benefits of centralized maintenance program for human services providers and other infrastructure support for agency transportation providers.	**Cost:** No additional funds required: covered under existing mobility management contract. Improved management of agency services to ensure compliance with FTA
Labor	Prior to labor negotiations, DTS should provide guidance to OTS to align labor relations objectives with City's goals, budget, etc.	**Cost:** Possible future cost savings Potential to closely align labor agreement with City budget objectives to control operating costs. Provides oversight of personnel expenditures

ALIGN CAPACITY WITH PROJECTED DEMAND IN A COST-EFFECTIVE MANNER: OPERATIONS		
Category	***Operations/Policy***	***Cost/Effect***
Labor	More closely align OTS wage/benefits provisions of bargaining unit employees with other public employees in Honolulu	**Cost:** Possible future cost savings More consistent wage/benefit programs across public agencies
Labor	Take steps to adjust the wage differential between TheHandi-Van drivers and Dispatchers and Schedulers to encourage skilled drivers to move into technical office positions	**Cost:** Not quantifiable Provides incentive to skilled drivers to move into technical office positions, resulting in more efficient service management
Labor	Establish a formal process of instructing OTS staff regarding labor contract administration on a periodic basis including immediately following the conclusion of any new labor agreement.	**Cost:** Negligible Improve labor management to increase efficiency and potentially reduce labor disputes

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Chapter 1: Introduction and Overview

Introduction

The planning process for the PGMS began in June 2015, with the assembly of available statistical data regarding the performance of the entire paratransit system for the previous three years. Data was gathered from DTS, OTS, several human service agencies that either receive or provide transportation services, and peer agencies around the United States that serve as a comparative base for establishing context for the City's approach to the paratransit service delivery mix.

The resulting PGMS covering the fiscal years 2018 through 2022 includes:

- A description of the current paratransit program
- Discussion of issues and trends that affect the City's ability to provide ADA paratransit services
- Recommended service and policy changes
- A demand forecast
- A financial and operating plan with projections of trips provided and costs

Overall direction of the PGMS was provided by DTS. Innovative Paradigms, as the City's designated mobility management consultant, has provided support to DTS in technical analysis, development of alternatives, and stakeholder participation. A key role was also played by OTS, as the operator of both the City's fixed-route bus and ADA paratransit services.

Representatives of three key human service agencies also participated in the preparation of the PGMS: Goodwill Industries of Hawaii, The Arc in Hawaii, and SECOH. The representatives of these organizations contributed background information on Medicaid transportation, projections of agency service increases, and feedback on proposed policy changes that would have an impact on the future operation of agency trips programs.

A series of technical workshops, meetings, and conference calls facilitated by Innovative Paradigms were held at strategic points throughout the study process. The attendees at these work sessions varied depending upon the subject matter, which included statistical analysis and data projections, human service agency transportation, and strategic planning.

The ADA and Public Transportation

The ADA states clearly that paratransit is a "safety net" service and is not intended for everyone. Indeed, the goal of the ADA has been to ensure access to fixed-route transportation for persons with disabilities, not to establish a separate transportation system. However, the legislation also recognizes that some individuals, because of the effects of their disability, will be prevented from using fixed-route all or some of the time. For these consumers, complementary paratransit is available.

In order to determine the relationship between the ADA regulations and TheHandi-Van's current status, it is important to understand some of the federal regulations associated with providing service to persons with disabilities. Please see Appendices A, B and C for more complete information on the Federal Transit Administration (FTA) Americans with Disabilities Act (ADA) Regulations, Guidance, and Procedures under Part 37 – Subpart F and the components that are most relevant to the transportation matrix on Oahu. Two critical compliance issues for the City's system are capacity and on-time performance. This PGMS presents strategies that address these issues.

Goals and Objectives for Paratransit Growth

The goal of the PGMS is to ensure the sustainability of the City's ADA paratransit service while maintaining full compliance with FTA ADA regulations.

Below are the objectives and methodologies for action, which support the defined goal. Some of the methodologies are addressed in the PGMS with detailed implementation recommendations while others, such as future facilities requirements, are beyond the scope of this PGMS and are identified to guide future planning efforts.

Objectives

MANAGE DEMAND TO ENSURE SERVICE AVAILABILITY

- Set fares at a level that more closely reflects the value of the service provided
- Encourage riders to select the most appropriate transit mode (fixed-route or paratransit) for each trip
- Continue in-person eligibility to ensure accurate eligibility determinations

ALIGN CAPACITY WITH PROJECTED DEMAND IN A COST-EFFECTIVE MANNER

Assets

- Maintain fleet size at a level that can effectively meet current and projected demand
- Replace vehicles on a consistent schedule, based on established criteria
- Invest in a fleet with an appropriate mix of vehicle types, so as to provide sufficient flexibility and capacity to meet riders' diverse service requirements

- Ensure facilities are appropriately located and adequately equipped to support operations, in light of travel patterns and urban growth

Operations

- Allocate resources to the most appropriate and cost-effective mix of services modes (in-house, supplemental providers, agency trips)
- Utilize existing resources more efficiently
- Ensure adequate staffing levels
- Hire staff with the specialized skill sets necessary to support efficient paratransit operations
- Ensure management and contractual relationships are structured in an effective manner

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Chapter 2: Current Paratransit Program

Introduction

Even prior to the passage of the ADA in 1990, the City provided transportation services to individuals with disabilities. In 1997, the City entered into a contract with OTS to operate both TheBus (fixed-route) and TheHandi-Van (ADA complementary paratransit). The City's fleet of fixed-route vehicles is 100% accessible, which is compliant with Federal regulations. TheBus is used extensively by seniors, persons with disabilities, and persons who qualify for Medicare.

Paratransit is provided by the City through its contract with OTS for directly operated services (TheHandi-Van), OTS' supplemental provider (taxi) services, and the City's contracts with Goodwill, The Arc and SECOH for agency-provided trips.

Paratransit Users

As of May 2016, there were 11,656 active riders using TheHandi-Van. An active rider is defined as an individual who has taken a minimum of two trips within the past two years. The table below provides a demographic overview of current paratransit consumers.

Figure 2.1 Active Riders

Riders by Gender		
Female	4,747	40.7%
Male	6,823	58.6%
No Gender Specified	86	0.7%
TOTAL BY GENDER	**11,656**	**100.0%**
Riders by Age		
20 and under	285	2.4%
21 – 40	895	7.7%
41 – 60	2,544	21.8%
61 – 80	4,444	38.1%
81 and older	3,461	29.7%
Age not specified	27	0.2%
TOTAL BY AGE	**11,656**	**100.0%**
Subscription Riders	**1,027**	**8.8%**
Riders who took 25 or more trips in April 2016	**1,290**	**11.1%**

Source: OTS Trapeze Data

Paratransit Eligibility

In 2007, the *Honolulu Paratransit Service Study Compliance Action Plan for the TheHandi-Van* recommended that an in-person eligibility program using functional assessments be implemented in order to ensure accurate determinations and to help reduce demand. An in-person process was also recommended as a method to ensure compliance with ADA eligibility requirements.

Since 2009, eligibility for TheHandi-Van has been determined through an in-person interview and transit skills assessment process, which has been reviewed by federal auditors and found to be

compliant. All applicants, whether new or recertifying, must participate at least once in an in-person interview. Based on nationwide best practices, the process is person-centered while maintaining adherence to ADA regulations and FTA guidance. Applicants are provided with free transportation to and from their appointments and may be accompanied by caregivers, family or friends, case managers, etc. The complete interview along with functional assessments of transit skills such as gait, balance, endurance, and navigation abilities can take up to 90 minutes, however the average length is 47 minutes.

The abilities-based approach to eligibility focuses on what an applicant is able to do. FTA guidance is very clear that paratransit eligibility is not a medical decision, but a transit decision. Consequently, observations, results of transit skills assessments, and one-on-one discussions with applicants are used to determine the individual's ability to use fixed-route service. Medical information from health care providers can be helpful in verifying a disability, but is not dispositive.

The following table shows determinations by eligibility type completed from 2009 through July 2016.

Figure 2.2 Eligibility Determinations 2009 - 2016

Determinations Completed (by Eligibility Type)							
	2009 -10	**2010 -11**	**2011 -12**	**2012 -13**	**2013 -14**	**2014 -15**	**2015 -16**
Conditional	623	408	433	554	426	295	434
Unconditional	2,409	2,556	2,309	3,362	3,496	2,992	2,855
Temporary Conditional	54	38	4	32	43	0	1
Temporary Unconditional	336	608	493	287	388	486	437
Not Eligible	134	165	146	202	125	93	116
Total Determinations	**3,556**	**3,775**	**3,385**	**4,437**	**4,478**	**3,866**	**3,843**

Source: TheHandi-Van Eligibility Center

Fare Structure

Local communities establish the fare structure for both fixed-route and paratransit service. Federal regulations allow that paratransit fares can be up to twice the full (non-discounted) fare on fixed-route service, for a trip of similar length, at a similar time of day, including transfer or other premium charges. In Honolulu, the TheHandi-Van fare ($2.00) is less than the basic fare to ride TheBus ($2.50). More information on the ADA requirements for paratransit fares is contained in Appendix B: ADA Circular Section 8.4.6 Fares.

While there are no discounted monthly or annual passes for use of TheHandi-Van, there are numerous discounts available to certain qualifying TheBus riders. Seniors age 65 and older, youth age 17 and under, persons with disabilities, and Medicare Card holders are eligible for reduced fares as shown in the figure 2.3 below.

Figure 2.3 Fare Comparison: TheBus and TheHandi-Van

Fare Type	TheBus	TheHandi-Van
Regular Fare - One-way	$2.50	$2.00
Monthly Pass[1]	$60.00	
Annual Pass[2]	$660.00	
Disability Fare - One-way	$1.00	
Disability Identification Card – Annual	$10.00	
Disability Monthly Pass Sticker (requires ID Card)[1]	$5.00	
Disability Pass - 1 year[2]	$30.00	
Disability Pass - 2 year[2]	$60.00	
Senior Fare - One-way[3]	$1.00	
Senior Identification Card (valid for 4 years)	$10.00	
Senior Monthly Pass Sticker (requires ID card)[1]	$5.00	
Senior Pass - 1 year[2]	$30.00	
Senior Pass - 2 years[2]	$60.00	
TheHandi-Van Fare - One-way (requires TheHandi-Van ID card)	$1.00	
TheHandi-Van Monthly Pass Sticker[1]	$5.00	
TheHandi-Van Pass - 1 year[2]	$30.00	
TheHandi-Van Pass - 2 years[2]	$60.00	
U.S. Medicare Card Fare - One Way	$1.00	
Youth Fare	$1.25	
Youth Monthly Pass[1]	$30.00	
Youth Annual Pass[2]	$330.00	

[1]Unlimited Use for regular and Express! during calendar month purchased
[2]Unlimited Use for regular and Express! during the calendar year(s) purchased
[3]65 years of age and older
Source: OTS

In order to receive the Disability Pass, riders must submit a one-page application that has been completed by a health care professional or a representative of a governmental agency recognized by the City.

Those applying for Senior Discounts are required to provide proof of age, such as a driver's license, passport, state-issued identification card, or birth certificate, in order to receive a Senior ID card, which then qualifies them for reduced fares. Riders who are eligible for Medicare simply need only to present their Medicare Card when boarding TheBus to pay the $1.00 fare.

More information regarding the impact of fare revenue and policies is contained in Chapter 3: Demand Management Strategies.

Ridership

Figure 2.4 below illustrates the number of trips provided for fiscal years 2013 - 2016.

Figure 2.4 Paratransit Trips by Service Provider

Service Provider	Trips			
	FY2013	FY2014	FY2015	FY2016
	Jul 12 - Jun 13	*Jul 13 - Jun 14*	*Jul 14 - Jun 15*	*Jul 15 - Jun 16*
TheHandi-Van	841,453	882,084	843,414	890,453
Supplemental Providers	160,254	145,416	168,348	190,368
Human Services Agencies				
Goodwill	75,239	74,968	88,096	70,479
SECOH		27,996	30,178	35,776
The Arc		37,123	57,181	55,722
TOTAL	**1,076,946**	**1,167,587**	**1,187,217**	**1,242,798**

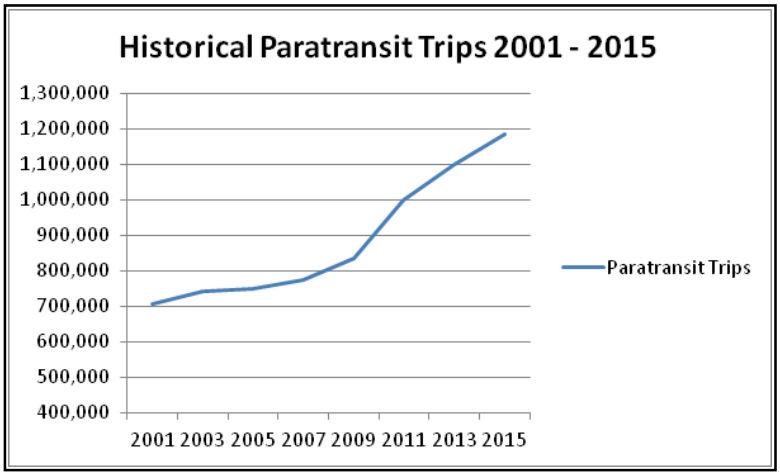
Source: OTS, DTS FY2016 Data
TheHandi-Van trips include eligible riders, personal care attendants (PCA), and companions

As noted in the figure above, TheHandi-Van also transports companions and personal care attendants (PCA) who travel with the paratransit-eligible rider. Companions pay TheHandi-Van fare, while there is no charge for a PCA. A PCA is someone who will assist the rider before, during or after the ride and may be a relative, friend, or paid caregiver. On average, TheHandi-Van transports between 12,000 - 13,000 PCAs and companions each month, whose trips are included in TheHandi-Van totals above. Goodwill, The Arc and SECOH provide approximately 13% of the ADA paratransit trips on Oahu and Supplemental Providers account for 15%.

Historical Service Growth

Figure 2.5 displays the growth in paratransit ridership between 2001 and 2015. Trips provided in 2001 numbered 705,000. By 2015, annual service from TheHandi-Van, supplemental providers and human service agencies totaled 1,187,217 trips, an overall increase of 63%.

Figure 2.5 Paratransit Trips 2001 - 2015



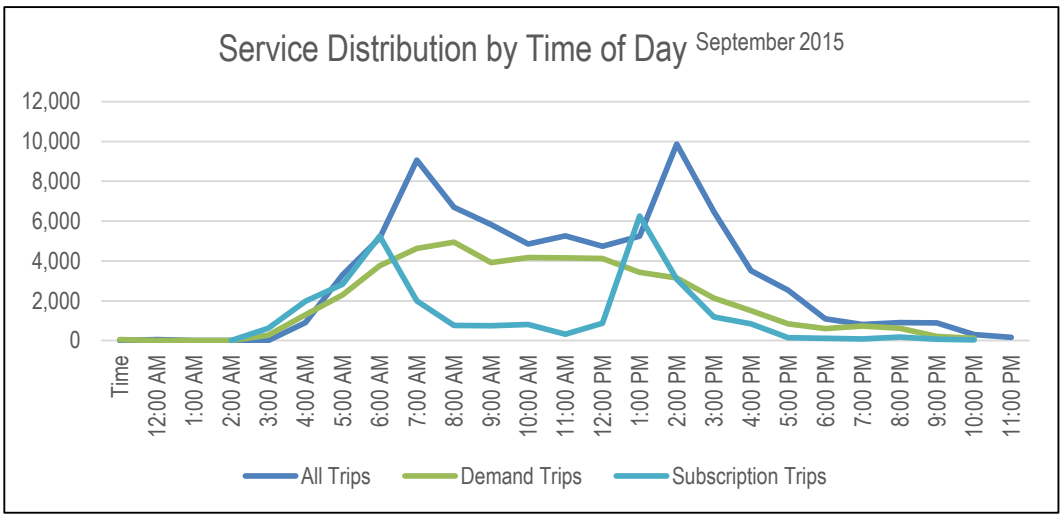
Source: Nelson\Nygaard

Demand by Time of Day

ADA regulations limit subscription service in any given hour of the day to no more than 50% of available capacity unless there is excess capacity during that period. This regulation is complicated by the interpretation of capacity indicators which include late trips, and excessive trip lengths.

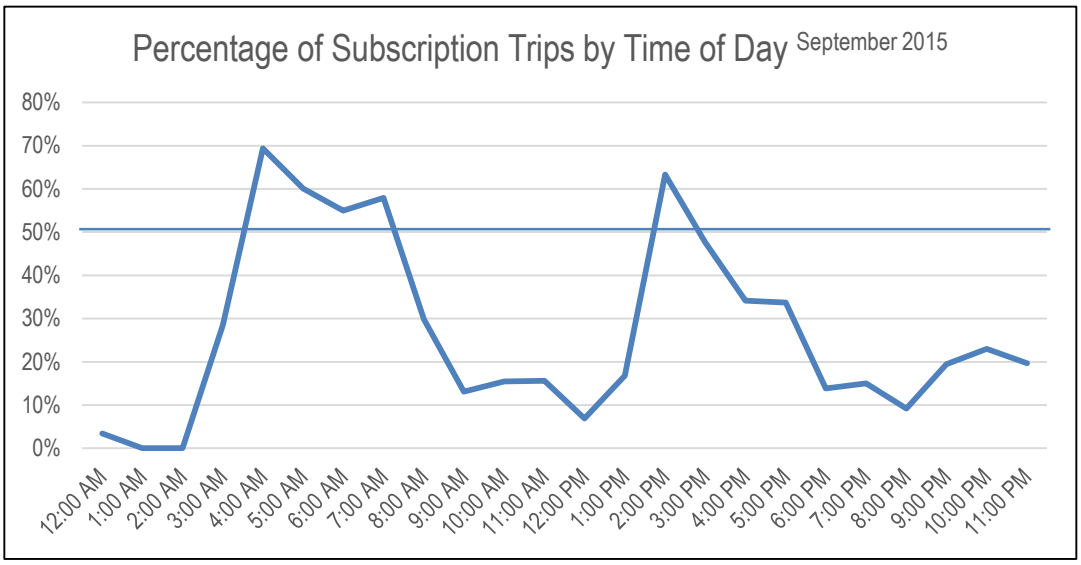
Data for September 2015, displayed below in Figures 2.6 and 2.7, shows the distribution of demand by hour of the day. This is a typical month of service for TheHandi-Van. Subscription service is concentrated during the hours of 7:00 am through 8:00 am and during the 2:00 pm and 3:00 pm hours. The high concentration of subscription demand during those hours could become an ADA compliance issue since more than 50% of service during those hours is dedicated to that purpose.

Figure 2.6 Service Distribution by Time of Day



Source: Nelson\Nygaard

Figure 2.7 Subscription Trips by Time of Day



Source: Nelson\Nygaard

The high concentration of subscription trips during peak hours suggests that human service agencies are the source of those trips. A greater emphasis on diverting agency trips to other modes of transportation would reduce peak hour demand and allow TheHandi-Van to spread its resources throughout the day.

Current OTS Staffing

As of March 1, 2016, the Paratransit Services division of OTS employed 364 individuals who report directly to the Vice President of Paratransit Services. In addition, two departments that report directly to the OTS Vice President of Maintenance and the Chief Financial Officer provide maintenance and accounting/personnel functions respectively. Figure 2.8 presents OTS personnel levels.

Figure 2.8 TheHandi-Van Staffing Levels as of March 1, 2016

Vice President of Paratransit Services (direct oversight)		
Senior Director of Paratransit	1	
Director of Paratransit Operations	1	
Drivers	300	
Support/Trainings	4	
Manager of Service Delivery		
Dispatch, Reservationists, Scheduling, Ops Clerks	53	
Customer Service Supervisor	1	
Customer Service Representatives	3	
SUBTOTAL		364
OTS Management (direct oversight)		
Paratransit Controller	1	
General Accounting & Personnel Records	8	
Paratransit Maintenance Manager	1	
Maintenance Staff	52	
SUBTOTAL		62
TOTAL		426

Source: OTS Organization Chart, March 1, 2016

TheHandi-Van Fleet

The three major types of service providers (TheHandi-Van, supplemental vendors, and human service agencies) each maintain their own vehicles that are suited for the type of service provided. TheHandi-Van relies primarily on 25-foot cutaways that have seating for ambulatory passengers as well as securement space for four or five wheelchairs. Supplemental taxis utilize sedan-type vehicles while the agencies typically use smaller cutaways, vans or mini-vans.

As the primary provider of service, OTS has the largest fleet with a total of 180 vehicles as of June 2016. These vehicles are owned by the City and operated by OTS. The majority of vehicles are cutaway buses as shown below.

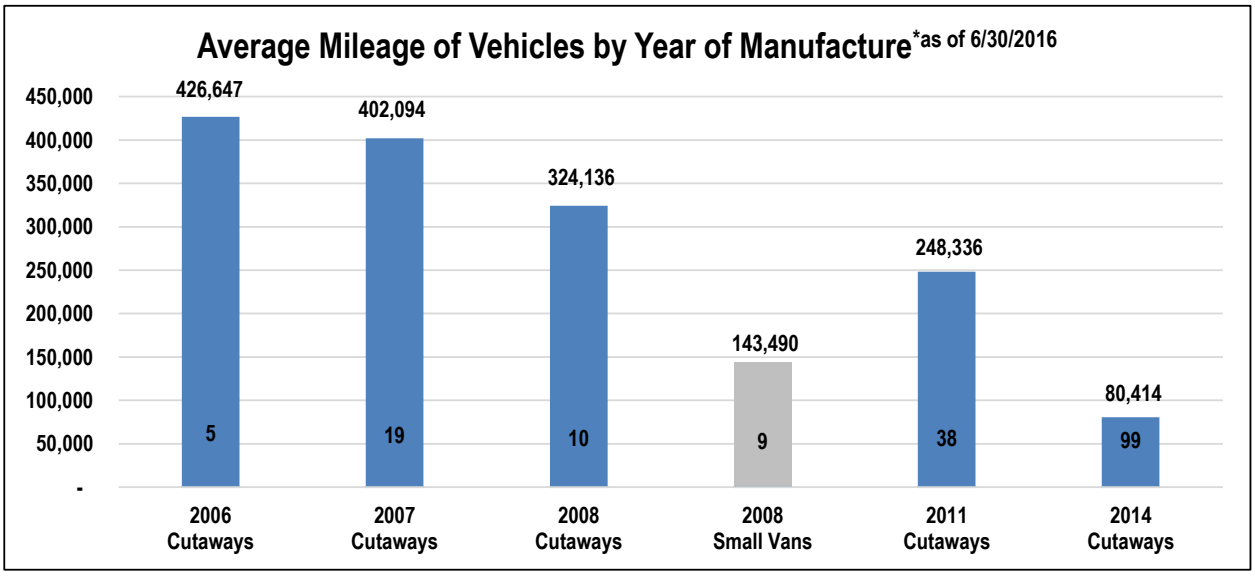
Figure 2.9 TheHandi-Van Fleet

QTY	Year	Type	Fuel	QTY
9	2008	Small Vans[1]	Gas	9
5	2006	25-foot Cutaways	Diesel	5
19	2007	25-foot Cutaways	Diesel	19
10	2008	25-foot Cutaways	Diesel	10
38	2011	25-foot Cutaways	Gas	38
99	2014	25-foot Cutaways	Diesel	99
			TOTAL	**180**

Source: FY2015 NTD Report (pre-final)
[1]Small Vans: indicates Uplanders

Typical TheHandi-Van vehicle. OTS has 171 such cutaways in its fleet of 180 vehicles.

Figure 2.10 TheHandi-Van Fleet by Year of Manufacture and Mileage



Source: OTS
Small Vans: Indicates Uplanders

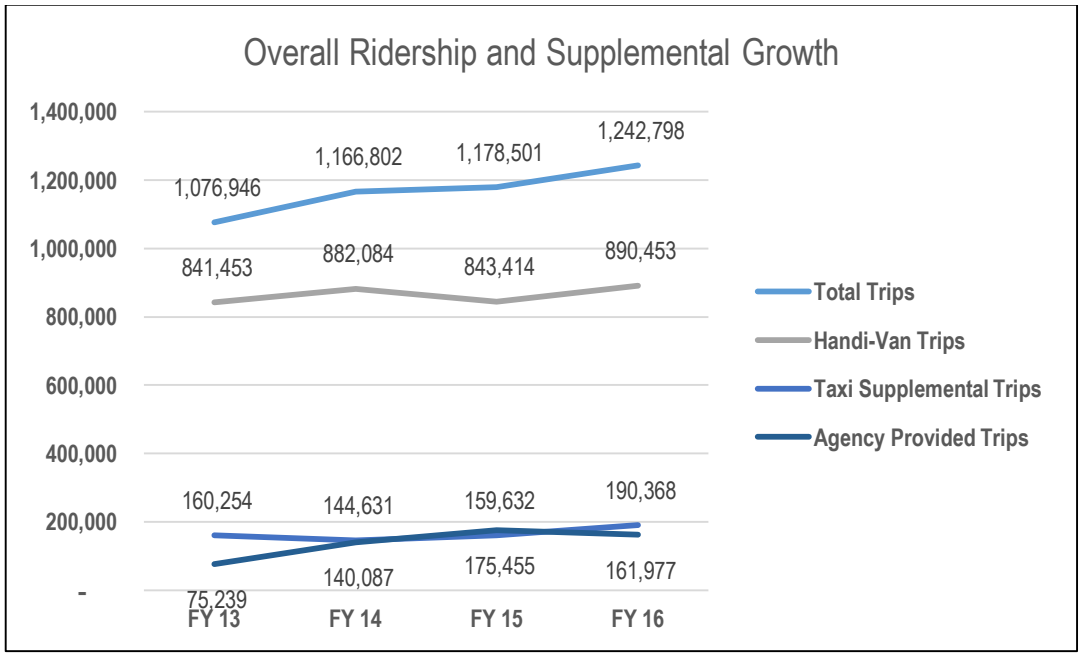
Information on the Agency Trips fleet is provided in Appendix E.

Supplemental Service

OTS currently contracts with three taxicab companies for supplemental service. This method is used both to add capacity at key times and because it is so cost-effective relative to TheHandi-Van. Taxis are used heavily during peak demand periods, which typically occur Monday through Friday from 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 4:00 pm. Costs are reimbursed at a negotiated contract rate based upon the meter rate, less TheHandi-Van regular fare paid by the passenger by either cash or ride ticket.

Between FY2013 and FY2016, the use of supplemental taxi service grew from 160,254 trips to 190,368 trips annually. In FY2013, the ratio of supplemental provider trips to the total of all TheHandi-Van trips was 15%. In May 2015, a third taxi provider (ECO-Cab) was added to the two long-established service providers (TheCab and ProCare.) Although supplemental service usage has continued to rise in FY2017, the PGMS assumes no growth past FY2016 levels. Discussions with key organizations, including OTS, indicate that the available capacity among supplemental providers may have been reached. Thus, the PGMS projections are based upon this limitation. Capacity could be influenced by future decisions regarding the use of Transportation Networking Companies (TNCs) or the introduction of other providers. Currently taxis are responsible for over 650 trips per average weekday.

Figure 2.11 Supplemental Service Growth



Source: OTS Monthly Performance Reports

The cost for supplemental service, at approximately $23.33 per trip in FY2016, was considerably lower than for TheHandi-Van directly operated service, which was $45.39 per trip in FY2016. The total cost reimbursed to taxi companies during 2016 was $4,440,583, or about 10% of overall paratransit expenditures.

Besides the operating cost savings, there are capital-related benefits of using third-party transportation providers such as taxis. These include a reduced need for peak hour fleet vehicles and also a reduced need for dedicated runs at very early or late hours. These runs are more expensive due to less opportunity to group shared rides together. In addition, use of supplemental vendors reduces the need for parking facilities for vehicles provided for paratransit service.

Taxi service is used primarily for ambulatory passengers as the taxi fleet in Honolulu has very few accessible vehicles and there is no contractual requirement for wheelchair-accessible vehicles. The productivity of taxi trips is greater than that of TheHandi-Van as trips tend to be shorter and dwell times for ambulatory riders tend to be less than with serving passengers who use wheelchairs.

In terms of quality, supplemental service is intended to mirror regular ADA service by the use of contractual requirements for vehicle condition and inspections, driver training, drug and alcohol testing, insurance and accident reporting, no-show and cancellation reporting to OTS, and performance reporting. The effectiveness of these requirements is dependent on OTS' ability to monitor and enforce them as well as on the strength of the contract provisions, which are discussed in more detail in Chapter 5: Core Service Delivery Elements.

Agency Trips Program

Whereas OTS manages service provided by TheHandi-Van and Supplemental Service providers, the City oversees the Agency Trips Program that supplies approximately 13% of all paratransit trips on Oahu. ADA-eligible riders in Honolulu who attend programs for fragile seniors and individuals with physical or cognitive disabilities receive transportation from human services agencies including Goodwill, SECOH and The Arc that operate the day programs. The Agency Trips Program is the third component of the Core Service Delivery of paratransit service on Oahu.

Greater detail on the Agency Trips Program is included in Chapter 3: Demand Management Strategies as "Agency Trips as a Demand Management Tool."

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Chapter 3: Demand Management Strategies

Introduction

The first and most effective approach to managing demand growth involves the adjustment of fares for ADA paratransit service. With the projected increase in ridership over the next five years, fare increases will need to be considered in order to maintain the financial stability of the paratransit system. While the current fare for TheHandi-Van ($2.00) is less than the standard fare for TheBus ($2.50) and the discounted fare for fixed-route is less than that for paratransit, there is no cost incentive for paratransit riders to use fixed-route.

A second major demand management strategy applied nationally is the application of a more thorough ADA paratransit eligibility process. With the passage of the ADA in the early 1990's, all systems were required to establish an eligibility process for qualification. Most early systems were based upon a paper application process with no actual evaluation of an individual's functional ability. As ADA programs matured, it became clear that a more thorough assessment process would result in ADA eligibility "strictly applied." This typically meant the introduction of an in-person process where an individual's functional abilities could be evaluated by a trained assessor to establish real eligibility. The result of such changes in process was a typical reduction of the demand growth for ADA paratransit service.

The City of Honolulu made such a change to an in-person process in 2009. The result of this policy decision was a predicted reduction in demand. This policy decision placed Honolulu in the company of most large paratransit systems nationally. From a continuing demand management perspective it is essential to continue with the in-person process as a growth control. Reverting to the earlier paper process would eliminate this control on demand and thus would spur growth.

A third demand management strategy involves a package of actions that can be relatively easily and quickly implemented to encourage greater use of TheBus by people with disabilities. The primary intent of the ADA for making transit available to individuals with disabilities is to require fixed-route accessibility, not to create a separate system for persons with disabilities. Complementary paratransit is mandated for those who cannot use a fully-accessible system. As the ADA paratransit system is intended to serve trips that cannot be accommodated on accessible fixed-route transit, riders should be directed to take as many trips as possible on TheBus. Given this, strategies that encourage use of fixed-route where possible are a key demand management tool.

Finally, Honolulu has developed successful partnerships with human service agencies that have resulted in over one hundred thousand ADA paratransit-eligible trips being moved off TheHandi-Van onto agency-operated vehicles per year. In FY2016, Goodwill, The Arc and SECOH provided 161,977 trips at an average cost of $8.78 per trip. The expansion of this program or other means of shifting agency trips off TheHandi-Van is the fourth strategy for growth management.

Fares as a Demand Management Tool

There are practical reasons that explain why fare policy is an integral part of paratransit growth management:

- **Paratransit services cost much more to provide than fixed-route transit, on a per-trip basis.** A 2013 TCRP report found that, according to the 2011 National Transit Database, the U.S. average cost to provide a bus trip was $3.60, compared to $32.70 for a paratransit trip, of which ADA paratransit comprises the greatest portion. This means that, nationally, paratransit was nine times as expensive to provide as fixed-route bus service. As of June 2015, TheHandi-Van cost per trip was $41.60 while TheBus fixed-route cost per trip was $2.69, making TheHandi-Van over 15 times more expensive than fixed-route.

- **Public policy in general provides for an expectation that users pay a "fair share" for services.** This is especially true for services as specialized and expensive as paratransit. Under the "beneficiary-pays" principle of service equity, the recipients of a service pay toward the cost of providing that service. One goal of these user fees is to reduce the burden on taxpayers to finance the portions of activities that benefit identifiable users above and beyond what is normally provided to the public.

Analysis of Existing Fare Structure

Most U.S. transit systems have a paratransit fare that is higher than the full fixed-route fare, and many set the paratransit fare at or slightly below the ADA limit of twice the fixed-route fare. It is rare for a city to have an ADA fare that is lower than the basic fixed-route fare. Among major transit systems, Seattle and Houston have a lower paratransit fare while New York and Cleveland have paratransit fares that are the same as fixed-route fares. These systems are not the norm.

Honolulu, in comparison, has regular paratransit fares that are 40% of the maximum allowed by the ADA. The cost of Honolulu's discounted monthly bus passes for seniors and persons with disabilities is the lowest in the U.S. While the basic monthly pass charge for TheBus, $60.00, is in the range with several other cities, the disabled and senior monthly pass is only $5.00. Even San Antonio, with a basic fixed-route fare of $1.20, charges $17.50 for its monthly pass. In addition, Honolulu adds to the deep discounting with an extremely low price of $30 for an **annual** pass for seniors and persons with disabilities, which equates to an average of 8 cents per day. This amounts to virtually free fixed-route service for these passengers. Meanwhile, all TheHandi-Van eligible riders automatically qualify for a discount fare $1.00 per one-way trip on TheBus, simply by showing their TheHandi-Van I.D. card.

In Honolulu, paratransit service appears under-valued in relation to both the fixed-route fare level and the high cost of providing paratransit service.

Rationale for Increasing TheHandi-Van Fare

The paratransit fares are very low in Honolulu. The existing TheHandi-Van fare of $2.00 represents about 5% of the cost of providing paratransit service. The mandated farebox recovery for TheBus fixed-route service is 27% to 33%. As of June 2016, TheBus achieved a 29% recovery ratio. TheHandi-Van has no similar farebox recovery requirement. As an example of standards in this area, some states, such as California, require public transportation agencies to produce a minimum amount of fare recovery in order to be eligible for state funding. California's paratransit systems must attain a fare recovery ratio of at least 10% — double what TheHandi-Van is recovering.

***Farebox Recovery**: The fraction of operating expenses that are met by fares paid by passengers*

If no demand management is implemented, limited resources will be stretched until service quality is degraded to the point of failure for users and potential regulatory (ADA) non-compliance.

In January 2016, Nelson\Nygaard prepared a Demand Projection for TheHandi-Van using data from FY2011 through FY2015. These demand projections subsequently were updated in August 2016, to take advantage of full-year data for FY2016. The complete report is included as Appendix D: TheHandi-Van Demand Projection.

TheHandi-Van passenger trips are expected to increase by 14.5% over the 5-year study period ending in 2022 if the Status Quo is maintained and no major changes are implemented. The net increase is approximately 129,000 annual passenger trips compared to FY2016. At a cost per trip of $54.16 (FY 2016 rate of $45.39, adjusted for inflation), this means that an additional $7 million would be needed to fund the service in FY2022.

Fare increases can contribute to the financing of these large overall cost increases, help to more effectively manage demand for the service, and may go so far as to reduce demand to the extent that significant cost savings are accrued. The Nelson\Nygaard projection uses the assumption of $.50 fare annual increases, beginning in FY2018. The fiscal year 2018 is suggested for the first increase to allow time for the necessary planning, public outreach, and rider education that would accompany such an increase.

Using Nelson\Nygaard's calculations and taking into account the proposed increase in Agency Trips by FY2022, projections indicate that these fare increases will result in an 11% decrease in TheHandi-Van passenger trips by FY2022, compared to the Status Quo projection of a 14.5% increase. A fare increase (in combination with other strategies in this PGMS) result in a total decrease of 99,000 passenger trips compared to FY2016, which would realize a cost savings of $5.4 million by FY2022.

While the need to increase fares during the study period is evident, it is also true that any fare increases should be incremental, in order to allow the community to more gradually adjust to the cost of the service. Raising fares in a phased, multi-year schedule is commonly used by fixed-route transit systems and has been implemented by TheBus in the past. The major task is to provide sufficient notice and information to customers and the community prior to fares changing at the designated time.

Figure 3.1 illustrates the increase at the 50 cent level in Years 2018 through 2022, which would result in a fare of $4.00 in 2021.

Figure 3.1 Fare Increase at 50 Cent Level

Year	$ Increase	% Increase	Resulting Fare
FY18	$0.50	25%	$2.50
FY19	$0.50	20%	$3.00
FY20	$0.50	17%	$3.50
FY21	$0.50	14%	$4.00
FY22	$0.00	0%	$4.00

Source: Nelson\Nygaard

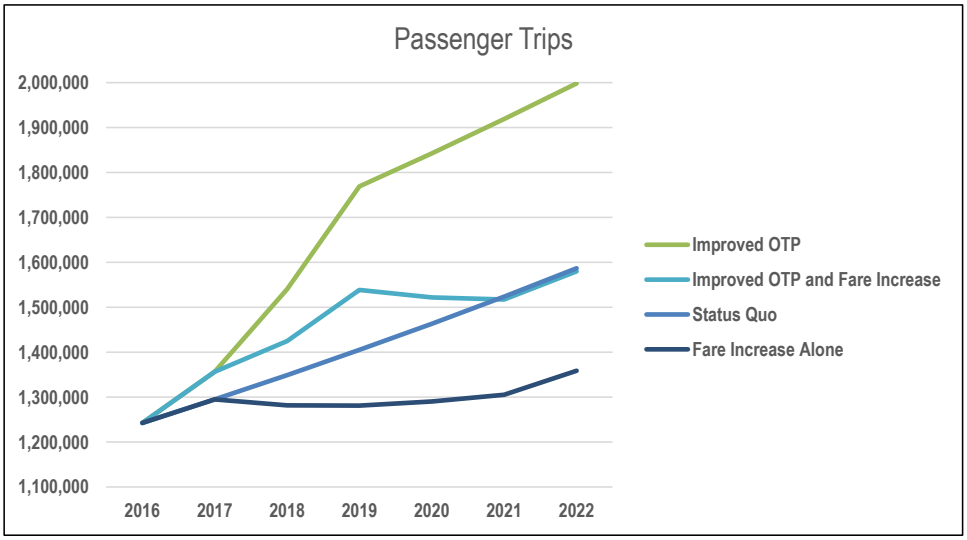
Figures 3.2 and 3.3 below present, in two different formats, the results of improved on-time performance (OTP), coupled with the fare increase. This follows the Nelson\Nygaard demand projections, with the assumption that on-time performance would gradually improve, settling at an effective “window” of 30 minutes by 2019. With fares increased, demand will decrease compared to the Status Quo. If fares are increased in combination with improvements in on-time performance, which has the effect of increasing demand, each 10% increase in fares is estimated to result in a 3% decrease in demand.

Figure 3.2: Ridership Demand with Alternative Fare Increase Scenarios

Passenger Trips Handi-Van, Taxi, Agency Provided	**Actual**	**Projections**				
SCENARIO	**FY2016**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
Fare Increase and Improved OTP[1]	1,242,798	1,424,596	1,538,301	1,521,996	1,517,071	1,579,682
Status Quo	1,242,798	1,348,876	1,404,994	1,463,265	1,523,838	1,586,729
Fare Increase	1,242,798	1,281,432	1,281,355	1,290,015	1,305,033	1,358,893
Improved OTP[1]	1,242,798	1,540,104	1,769,179	1,842,554	1,918,828	1,998,020

Source: Nelson\Nygaard
[1]OTP On-Time Performance

Figure 3.3: Ridership Demand 2016 – 2022



Source: Nelson\Nygaard

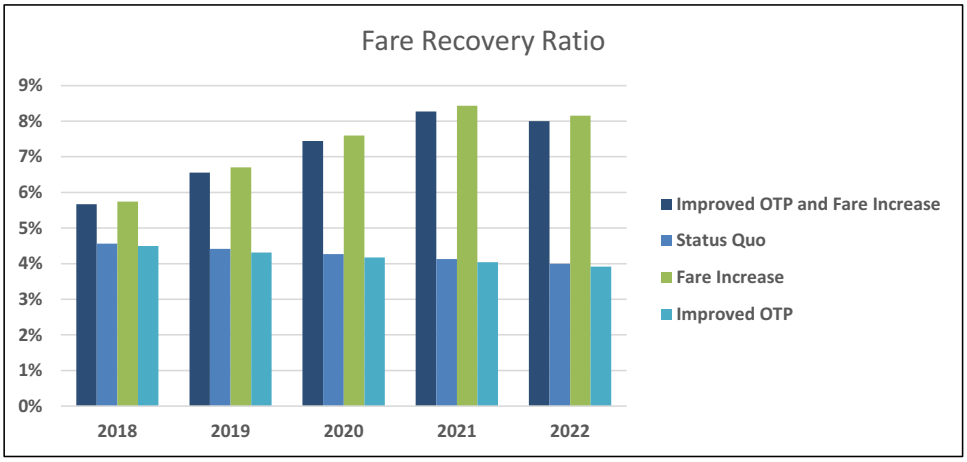
In addition to the cost implications of reducing trip demand, the other effect of fare increases is to raise revenue from passengers. Based on the new trip demand levels from the fare increase scenarios shown in Figures 3.2 and 3.3, the change in revenue is shown in Figure 3.4. For illustration purposes, the fare revenue numbers are based on the gross fare per passenger trip – that is, not accounting for non-fare paying passengers such as personal care attendants (PCAs).

Figure 3.4: Fare Recovery by Scenario

Fare Revenue (gross)					
	2018	**2019**	**2020**	**2021**	**2022**
Fare Increase and Improved OTP					
Fare Revenue (gross)	$2,785,870	$3,637,622	$4,129,816	$4,631,683	$4,810,297
Fare recovery %	6%	7%	7%	8%	8%
Status Quo					
Fare Revenue (gross)	$2,077,256	$2,158,467	$2,242,433	$2,329,375	$2,419,241
Fare recovery %	5%	4%	4%	4%	4%
Fare Increase					
Fare Revenue (gross)	$2,427,961	$2,866,783	$3,317,883	$3,783,527	$3,927,137
Fare recovery %	6%	7%	8%	8%	8%
Improved OTP					
Fare Revenue (gross)	$2,459,712	$2,886,837	$3,001,012	$3,119,355	$3,241,824
Fare recovery %	4%	4%	4%	4%	4%

Source: Nelson\Nygaard and Innovative Paradigms

Figure 3.5: Fare Recovery Ratio 2018 - 2022



Source: Nelson\Nygaard

Additional Fare Issues

Premium Service and Fare Considerations

The ADA allows for transit agencies to charge higher "premium" fares for service that is above and beyond the ADA. The types of services typically considered "beyond the ADA" include:

- Same-day service
- Trips with origins or destinations outside of the ¾ mile corridor around the fixed-route service area
- Specialized service for human services agencies

The idea of premium charges is that the extra cost of providing the above-and-beyond service will be covered by the premium fare, so that basic ADA service is not degraded due to the extra service. In situations where the paratransit service is fully ADA-compliant, premium fares can also alleviate all or part of any public subsidy to the additional service.

TheHandi-Van provides some service that is above the ADA. Within its regular fare structure, OTS already does some same-day trips as well as some trips outside of the ¾ mile fixed-route area. Service is also provided to numerous human services agencies across Oahu. While neither of these is a large quantity of trips, both trip types allow for a premium fare and could be treated as such from a policy perspective. Same-day trips can include trips that are actually requested on the day of service and would therefore be eligible for premium fare consideration. Other "same-day" type trips include "will call return" trips which are actually inserted into schedules on the day of service but were the result of trips scheduled within the scheduling window days in advance. These typically would not fall in the premium fare category.

Although TheHandi-Van service is provided outside of the 3/4 mile corridor, statistics suggest that less than 2% of trips are provided outside of the corridor. The introduction of a premium fare for such a small segment of the rider group would have no measurable impact on fare revenue and the complications of applying a premium fare to such a small group could outweigh any benefit derived. This may also be the case with same-day trips if the number is very small. Some communities are beginning to experiment with programs that encourage eligible individuals to schedule same-day trips with a small per-trip subsidy as a way to take them out of ADA consideration and reduce overall ADA demand. Use of taxis and TNCs is being considered by transit agencies in various locations, such as Honolulu and Boston, for such programs.

Premium Service for Medicaid-funded Programs

Medicaid funding for transportation is an important element of paratransit finance nationally and thus is in Honolulu. Medicaid typically supports services to eligible individuals who meet certain criteria including income or disability. There are two types of Medicaid programs that affect paratransit services in Honolulu. The first and most important is the Medicaid Waiver program.

In Hawai'i, the State Medicaid program funds agency programs for disabled clients under the federal waiver rules. This allows social service agencies, such as those providing work or day programs for developmentally disabled clients or for adult day health care, to cover the various costs of program components. The Medicaid waiver program in Hawai'i sets per-capita rates that are allowed for program expenses. The current rate is just over $68 per client per day. That means that all program costs, including transportation, must be covered within this amount, including the local match to the federal Medicaid funds. Increasing the amount paid for transportation, such as with an "agency" fare higher than the regular ADA fare currently being paid, would mean that other program essentials would have to be reduced or curtailed. For this fundamental reason, the transit agency has limited leverage with which to negotiate higher agency fares.

At the time of this PGMS, discussions have been initiated between DTS, OTS, human services agencies such as Goodwill, The Arc and SECOH, and the Hawaii Department of Human Services regarding possible refinements to the Medicaid program in Hawaii. The intent of these discussions is to determine if the Medicaid model used in other States, such as Oregon, might be applicable to Hawaii. These other States use a different cost sharing model between the State, the Federal Medicaid program, and transit operators that can provide for a higher per trip cost reimbursement rate for transit operators. While the impact of higher fares was discussed with local human service agency representatives, more details are needed before a new fare structure can be considered. Therefore, it is not possible to provide estimates or projections for the purposes of this five-year Study.

Eligibility as a Demand Management Tool

In 2009, the City moved from a paper-based to an in-person eligibility process following national best practices recommended by Easter Seals Project Action (ESPA) and the National Transit Institute (NTI).

Figure 3.6 shows that by the end of year 2, a reduction in applications of 27% had occurred. Years 3 through 5 showed a continued decline in the rate, although not nearly as dramatic as in the first years. This pattern is typical of the national experience. The results of introducing the in-person process are typically realized almost immediately with both new and recertification rates declining as soon as the process begins. The expectation is that at some point, a new "floor" will be achieved after the dramatic effect has occurred. Once that new low point is achieved, gradual growth often begins to occur. This reflects two key phenomena: 1) the increase in growth starts from the new lower base, and 2) the rate of growth continues to be tempered by the existence of the process. After seven years of in-person eligibility, the number of clients remains lower than 2009 levels.

Figure 3.6 Eligibility Demand Management

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Change
Client Records in System		**2009-10**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**from 2009**
Beginning of IPA Year[1]		19,552	14,330	13,340	12,813	12,880	13,752	14,229	
New Eligible Riders Added		2,379	1,887	2,010	2,460	2,916	2,518	2,366	
Reported Deceased During Year[2]		(107)	(58)	(96)	(106)	(146)	(148)	(171)	
Did not recertify		(7,494)	(2,819)	(2,441)	(2,287)	(1,898)	(1,893)	(1,852)	
YEAR END TOTAL[3]		**14,330**	**13,340**	**12,813**	**12,880**	**13,752**	**14,229**	**14,572**	
% Change from Prior Year		**-27%**	**-7%**	**-4%**	**1%**	**7%**	**3%**	**2%**	**-25%**

Source: TheHandi-Van Eligibility Center

Beginning of IPA Year[1] 2009: Original import of TheHandi-Van client records for active riders in the system

Deceased[2] The Eligibility Center did not receive information on deceased clients until 2010

Year End Total[3] As of December 31

The table demonstrates that since introduction of the program, a 25% decline in the application rate overall has been experienced. The continued use of the in-person process as implemented today is expected to have the ongoing tempering influence on the application rate.

Once an in-person process is introduced as a growth management strategy, it must be continued in order to maintain its desired result. Return to a paper process typically triggers an eventual return to previous high levels of applications.

Promote Use of TheBus as a Demand Management Tool

The primary intent in the ADA for making transit service available to disabled individuals was to require fixed-route accessibility. Complementary paratransit was mandated only for those individuals who could not use a fully-accessible fixed-route system all or some of the time.

Individuals with disabilities who can use the fixed-route system have much greater travel flexibility than do paratransit-only users. While many people in Honolulu assume "everyone knows about TheBus", this view is not validated by applicants to the Eligibility Center who are not aware of the accessible nature, convenience and affordable cost of the City's public transit system. Similarly, many individuals who face transitions in life (for example, from public school to adult day programs or from driving to not driving) are not aware of the benefits of using TheBus. Targeted informational marketing efforts, community outreach, and connecting with these groups through a variety of travel training programs, while they are physically and mentally able to use fixed-route and before they see paratransit as their only option, can result in very positive outcomes.

Travel Training

Travel training, which is also commonly called mobility training, is the provision of instructional services and support to persons with disabilities, seniors, and others who need assistance to use public transportation, especially to maintain their independent mobility in the community. Travel training programs are well-established components of growth management strategies. While some programs are established to divert trips that would otherwise be taken on the paratransit system by paratransit eligible riders, successful programs often offer training and social activities that encourage use of fixed-route service to individuals before they consider applying for paratransit eligibility.

A travel trainer assists a client during a travel training session. At the conclusion of her training, this woman will be able to independently use fixed-route service for many of her trips.

After experimenting with various models of travel training, Honolulu currently has a limited program that trains a modest number of students, approximately 60 per year. Training is done by Abilities Unlimited, a non-profit social service agency that helps people with disabilities to gain independence, primarily through employment. This is carried out as part of Honolulu's Mobility Management Program.

Abilities Unlimited works as a sub-contractor to the City's Mobility Management provider, Innovative Paradigms. Until recently, the funding for this program was aimed at assisting individuals obtain jobs and/or job training, and many of the participants were referred by the state Division of Vocational Rehabilitation. Because of this, the pool of potential trainees was constrained by the use of federal funding for transportation for access to employment and/or employment training, thus eliminating seniors who have left the workforce, students who have not entered the workforce, or persons with disabilities who are unable to work. Currently, the program

is in the initial stages of expansion to include seniors, transitional students, and other individuals with disabilities.

Types of travel training include:

- Traditional, one-on-one intensive skills training for job-related activities (currently provided)
- School classroom (especially for developmental/intellectual disabilities) programs (not available)
- Group programs, especially for seniors and foreign language-speaking groups (not available)
- Peer-to-peer models that pair learners with experienced members of their own affinity groups (not available)
- Transit Orientation for those who need a short course in how to use today's public transit (not available)

An enhanced travel training program could be implemented during the five-year PGMS period.

Upgrade online travel planner

The existing online travel planner for TheBus is the basic Google Maps transit directions tool. It is not particularly user-friendly or flexible for persons with disabilities. A purpose-built travel planner could give travelers with disabilities, seniors, and their caregivers better access to resources that encourage independent use of the bus system. Should Honolulu implement trip-by-trip eligibility, then the users of an enhanced travel planner may include paratransit reservations and scheduling staff, especially when evaluating trip-by-trip eligibility options (in addition to the fixed-route information native to the paratransit scheduling system, which could possibly serve as the basis for a dedicated travel planning tool).

Whether travel planning is done with the existing Google tool or a separate, dedicated travel planning system, enhanced service that could help people with disabilities, especially those with cognitive impairments, would be beneficial in helping to move riders from paratransit to fixed-route service. Nationally, transit agencies are employing a variety of user-friendly tools in addition to standard services such as the existing TheBus telephone information staff function. Expanded assistance would empower users to navigate the bus network on their own, which would afford much greater independence and flexibility than relying on the traditional telephone information function. Of course, the telephone service would still remain a key service for customers who have limited or no use of computers or mobile devices.

Make access to website easier

Currently, there are no links to or from TheBus website to TheHandi-Van website. Links should be provided so that potential applicants for or current users of TheHandi-Van can learn about the accessible features of TheBus, as well as discount fares, trip planning, etc. Similarly, visitors to TheBus website should be able to access information on paratransit with one click.

Content on the TheBus website could be enhanced to include information on the Transit Mobility Preparation and Wheelchair Marking and Tether Strap Program. Connecting fixed-route and paratransit can help the community at large to see the transportation on Oahu as an integrated system.

Agency Trips as a Demand Management Tool

The use of human service agencies as providers of paratransit service to their clients is a successful approach to the delivery of a portion of transportation service to disabled persons. In 2015, three human service agencies transporting their own ADA-eligible clients saved the City over $6.2 million, as shown in Figure 3.7 below.

Figure 3.7 Agency Trips: 2015

Agency	Vehicles	Annual Trips	Agency Cost Per Trip	Agency Total	TheHandi-Van Total[1]	Savings
Goodwill	21	88,096	$5.02	$442,242	$3,664,794	$3,222,552
The Arc	25	57,181	$7.51	$429,429	$2,378,730	$1,949,300
SECOH	8	30,178	$10.16	$306,608	$1,255,405	$948,796
TOTAL	**54**	**175,455**		**$1,178,280**	**$7,298,928**	***$6,120,648***

TheHandi-VanCost[1] based on per trip cost of $41.60 in 2015
Source: 2015 NTD Data, OTS 2015 Financial Report

A number of communities have used such an approach for many years. In certain cases of advanced development of this concept, some human service agencies collaborate to share resources or combine passengers to achieve greater efficiency. There are many significant benefits to providing service through such programs.

The use of human service agencies to provide transportation has existed off and on in Honolulu for a number of years, largely depending upon available funding. In 2007, as part of a larger consulting analysis of paratransit service in Honolulu, Nelson\Nygaard recommended this as one strategy for providing paratransit service at a lower-cost than TheHandi-Van. In 2009 the first *Human Services Transportation Coordination Plan* (HSTCP) for Honolulu recommended a pilot project to test the concept and demonstrate the efficiency of this approach. That recommendation resulted in a federal grant matched by City funds being awarded to Goodwill to initiate transportation service and take a significant number of its program participants off of TheHandi-Van.

Goodwill began operating service in May, 2010, with seven vehicles. In the first twelve months of operation, Goodwill provided over 58,000 trips that would have been carried on TheHandi-Van. The Goodwill cost per trip (including allocation of Mobility Management support funds) was only $4.85, as reported in the 2012 HSTCP. This success set the stage for consideration of a much larger role for human service providers. In the updated HSTCP in 2012, major emphasis was placed on this concept. All agencies associated with that planning process including DTS, OTS, human service agencies, and advisory bodies endorsed the plan recommending much greater use of agencies.

Among the HSTCP's recommendations is the potential redirection of funds intended for TheHandi-Van to human service agencies as the corresponding trips are moved to agency providers. This concept is incorporated into the PGMS in a slightly different manner. The overall allocation of available funds between TheHandi-Van, agency providers, and other options including taxis are addressed as in the overall mix of funding and providers.

In 2013, the City released a Request for Proposals (RFP) to expand the agency trips program and further reduce peak-hour demand for TheHandi-Van. This program expansion was financed by City funds and did not include any federal grants and resulted in the award of three-year contracts to The Arc and SECOH with options to extend the contract for two additional years. The funding was sufficient to allow The Arc purchase new vehicles and to move all of its transportation off of TheHandi-Van. With the development of its own transportation infrastructure, The Arc is not only able to provide all service between client residences and program sites, but is also able to operate all of its own mid-day trips for community outings, which would have previously been provided by TheHandi-Van.

SECOH was also able to purchase new Handi-Van type vehicles through its contract with the City. This allowed the agency to greatly expand its agency-operated service and diverting many of its trips from TheHandi-Van. Soon after the major expansion of transportation, SECOH created a new program serving disabled students coming out of high school and into the public transit world. This resulted in a new infusion of SECOH trips on TheHandi-Van that largely offset those removed through its contract with the City. SECOH's program is indicative of a significant source of demand growth for ADA paratransit. The table below illustrates the size of the current Agency Trips program, and sets the stage for these emerging students to be either transported by the agencies or for the students that are able to be trained to use TheBus.

Figure 3.8 summarizes the impact of this program to OTS boarding statistics. One-hundred percent of subscription trips to or from The Arc locations were moved from TheHandi-Van to the agency. Reductions also were achieved at Goodwill (32%) and SECOH (55%). The three agencies that have been working with DTS reduced their use of TheHandi-Van subscriptions by an average of 14,500 trips per month or about 175,000 trips per year. Altogether, subscription trips to and from all agency locations fell from 20,038 in September 2011 to 15,262 in September 2015, a reduction of 24%.

Lanakila Pacific and Responsive Caregivers of Hawaii (RCH) are expected to begin providing service to their own clients in FY2017. The addition of these agencies as new Agency Providers to the City increases the challenge to the City to effectively manage the expanding program. Meanwhile, some other agencies have increased their use of TheHandi-Van, notably RCH which had to eliminate its transportation program due to financial difficulties. Also, ORI Helemano established a new program.

Figure 3.8 Comparison of Monthly Agency Trips Provided by TheHandi-Van, Sept. 2011 and Sept. 2015

Agency	HV Trips Sept. 2011	HV Trips Sept. 2015	% Change
The Arc	***3,553***	***0***	***-100%***
Goodwill	***1,645***	***1,114***	***-32%***
SECOH	***3,151***	***1,403***	***-55%***
Easter Seals	1,770	1,921	9%
Lanakila Pacific	3,676	3,267	-11%
Home & Community Service	1,624	1,386	-15%
Family Services	1,189	955	-20%
Kokua Villa	802	578	-28%
Manawa Lea	767	801	4%
Hale Nui Community Services	645	620	-4%
Seagull Daycare	464	434	-6%
RCH	414	1,347	225%
Preferred Home & Community Based Services	300	836	179%
ORI Helemano	38	600	1,479%
Total	**20,038**	**15,262**	**-24%**

Source: Nelson\Nygaard

In spite of early efforts to establish the Agency Trips concept in Honolulu, a large number of trips to agencies are still provided by TheHandi-Van in 2016. In meetings with DTS, both Goodwill and SECOH expressed interest in expanding their transportation programs if funding is made available. Their informal estimates of potential expansion are the basis of the values for these two agencies shown in Figure 3.9. The table also shows the impact of reduced use of subscriptions by five other large human service programs based on a budget for FY2017 prepared by DTS. In all, these estimates represent approximately a 67% increase in the current city-agency partnership over the next five years. The 3,898 trips per month that would be shifted from TheHandi-Van to agency transportation correspond to approximately 47,000 trips per year.

Figure 3.9: Projected Monthly Impact of Expanded Agency Service FY2017

Agency	Monthly Trips Provided By Agency	Percentage of Reduction TheHandi-Van Service	Monthly Trips Removed From TheHandi-Van
SECOH	1,403	-57%	-800
Easter Seals	1,921	-25%	-480
Goodwill	1,114	-56%	-624
Home & Community Service	1,386	-25%	-347
Kokua Villa	578	-25%	-145
Hale Nui Community Services	620	-25%	-155
RCH	1,347	-100%	-1,347
Total	**8,369**		**-3,898**

Source: Nelson\Nygaard

Agency Trips Expansion

The Agency Trips Program has proven to be a very cost-effective service delivery strategy for Honolulu. From the earliest pilot project with Goodwill through the recent contracts with The Arc and SECOH, the financial results by virtually any measure have proven outstanding. In FY2016, Agency Trips operated at an average cost per trip of $8.78. The agencies have creatively utilized their operating funds to obtain equipment with which to provide the service. For example, Goodwill has rented vehicles mostly from VRide to provide its service. The Arc and SECOH are paid on a per-hour basis and built the costs associated with providing vehicles into their hourly rates.

In contrast, the FY2016 per trip rate for TheHandi-Van is $45.39 and covers operating expenses only. If vehicle capital costs were included to make it comparable to the agencies, the per-trip cost would be substantially higher. This reflects favorably on expanding the Agency Trips Program as a cost-effective method for accommodating the growth in overall demand.

Negotiated fares for agency trips

Social service agency clients consume a considerable proportion of TheHandi-Van service for trips to and from agency day programs and work sites. In addition to heavily contributing to the subscription load, many agencies have stringent demands about pick-ups and drop-offs being precisely timed to coincide with program start and end times.

ADA regulations allow for transit agencies to negotiate higher fares for trips guaranteed to agencies, in comparison with the normal limit on fares. While this approach is possible, it is rare among transit agencies as it requires a highly cooperative and coordinated effort among multiple state and local agencies. Especially limiting is the fact that Medicaid-funded social service agencies work on a “capitated” type of reimbursement in which all program expenses must be covered under a single per-client daily rate.

At the time of this writing, the Medicaid Waiver Program is being reauthorized in Honolulu. Reports indicate that little if any adjustment in rates will result, and agencies may not be in a position to absorb a fare increase without extreme financial hardship. Therefore, the major human service agencies would need to be engaged in any dialogue regarding higher agency fares. Please see Premium Service and Fare Considerations in Chapter 3: Demand Management Strategies.

Honolulu agency trip conditions

Nineteen of the larger social service day programs on Oahu account for almost 1,000 daily regular subscription trips for clients on TheHandi-Van, according to a 2014 study by OTS. In addition, there are a number of other agencies with smaller client trip loads. These programs generally pay for the paratransit trips of their clients by purchasing TheHandi-Van ride tickets. This financial arrangement means that the service meets the federal definition of “trips guaranteed to the organization.”

Over a long period of time, OTS has developed a relationship with many human service agencies whereby drop-off times in the morning and pickup times in the afternoon have been set as "precise" delivery times for TheHandi-Van. This policy is very beneficial to the agencies in narrowing the window of time that staff must be on duty, allowing for precise time management by the agencies which supports a Medicaid billing mechanism that is based upon hours of attendance, and allowing cost control due to the consolidation of attendance. TheHandi-Van typically sets its arrival times at agencies at fixed times and adjusts other trips such that their impact on the agencies is minimal. For the afternoon pickups, many TheHandi-Van manifests are constructed to begin at the agencies or to allow vehicle staging at the agencies to "guarantee" the pickup time.

The establishment of such precise drop-off and pick up times for agencies exceeds ADA guidelines. As these agency trips become "dictated rather than negotiated pickup times," they fall outside of ADA classification. Among other implications of this is that they would qualify for charging a higher fare than otherwise allowed by ADA.

The heavy use of TheHandi-Van for agency trips is also seen in the subscription “load” on the service at peak times. Recent data from OTS reveals that subscriptions consume up to 60% of capacity at certain hours of the day. As shown in Figure 3.10, subscription demand is especially high between 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 4:00 p.m. Four different one-hour time blocks on an average service day had subscription loads in excess of 50%. It is presumed that if the data were to be limited to weekdays only, the percentages would be higher and there may be more than four time blocks exceeding 50%.

Figure 3.10 Service Distribution by Time of Day – September 2015

	TRIP TYPE				
Time	**Demand**	**Same Day - Will Call**	**Subscription**	**TOTAL**	**Peak Hour**
12:00 AM	51	5	2	58	
1:00 AM	2	2		4	
2:00 AM	6			6	
3:00 AM	10		4	14	
4:00 AM	271	7	629	907	
5:00 AM	1,298	23	1,985	3,306	
6:00 AM	2,292	29	2,835	5,156	
7:00 AM	3,763	49	5,250	9,062	15,758
8:00 AM	4,635	60	2,001	6,696	
9:00 AM	4,942	119	761	5,822	
10:00 AM	3,921	177	751	4,849	
11:00 AM	4,177	261	819	5,257	
12:00 PM	4,159	250	328	4,737	
1:00 PM	4,127	243	881	5,251	
2:00 PM	3,423	195	6,247	9,865	16,340
3:00 PM	3,151	237	3,087	6,475	
4:00 PM	2,131	178	1,197	3,506	
5:00 PM	1,505	168	850	2,523	
6:00 PM	838	111	152	1,101	
7:00 PM	605	91	123	819	
8:00 PM	725	104	84	913	
9:00 PM	629	86	173	888	
10:00 PM	215	19	70	304	
11:00 PM	120	15	33	168	
TOTAL	**46,996**	**2,422**	**28,256**	**77,605**	**32,098**

Source: Nelson\Nygaard and OTS

While subscription trips can be scheduled by individual passengers as well as agencies, agency trips remain a major generator of TheHandi-Van subscriptions.

Since TheHandi-Van currently does not have outright capacity denials, the matter of subscription load being over 50% does not immediately trigger concern with the ADA limit of 50%. TheHandi-Van could be considered to have capacity constraints if it has significant numbers of missed trips, very late trips, overly long trips, or trip-time negotiations greater than one hour before or after the desired time. In that case, the over-50% subscription loads would no longer be permissible.

Chapter 4: Core Service Delivery Elements

Introduction

The projected growth in demand for ADA paratransit services through the five-year study period of FY2018 - FY2022 presents significant challenges for the City. The increase in demand in the absence of any policy intervention is anticipated to be between 50,000 and 60,000 new trips per year, which represents growth of nearly 238,000 trips between 2018 and 2022 under the Status Quo Scenario. Growth in demand for paratransit service can be met through a mix of service delivery options, which are detailed in this chapter.

Core Service Delivery Elements: The Core Elements tools are the major sources of additional service capacity:

- TheHandi-Van is the major paratransit provider on Oahu currently providing 71% of all paratransit trips.
- Supplemental Providers are private operators delivering paratransit rides under contract to OTS. At present, TheCab, Procare and EcoCab are the supplemental operators for OTS, providing approximately 15% of the total paratransit trips.
- Agency Trip Providers are non-profit human service agencies that typically operate day programs for eligible clients with disabilities. They provide 13% of the ADA paratransit trips, most of which are during peak hours. The City Department of Transportation Services (DTS) contracts with three of these agencies (Goodwill, The Arc, and SECOH) to provide some or all of the transportation to their clients.

With the projected growth in overall ADA paratransit demand during the five-year horizon of this PGMS, the three Core Provider components are anticipated to absorb the majority of the additional demand. The level of demand that is accommodated varies according to demand scenario.

As mentioned previously in this Study, the Improved On-Time Performance Scenario would bring reduce the effective window to 30 minutes and would ensure continued compliance with the ADA when using on-time performance as a measure. However, this increase in service would require an enormous investment by the City that could threaten the sustainability of the system. Therefore, two of the four Scenarios offer a fare increase as the key demand management strategy to offset an otherwise extraordinary increase in the cost of paratransit service.

Fare Increase and Improved On-Time Performance Scenario

If this scenario is implemented, full ADA compliance would be maintained due to heavy investment in service improvements, which would result in increased demand. This large increase in demand would be restrained by a fare increase and result in a 27% demand increase, which is a dramatically lower increase than under the Improved On-Time Performance Scenario alone. Its key features are listed below:

- Improvement in on-time performance from an effective service delivery window in 2016 of 45 minutes down to an effective window of 30 minutes by FY2019.
- Projected total increase in overall demand of over 27% between FY2016 and FY2022.
- Increase in fares in $.50 increments to $4.00 during the five-year study period.
- Continued compliance with FTA ADA standards.
- Core Service Elements:
    - Slight increases in TheHandi-Van budget once the fare increase is introduced. The fare increase would temper the demand growth curve, while still attaining significant improvement in on-time performance.
    - No increase in the use of Supplemental Providers.
    - Significant increase in the use of Agency-Provided Trips.

Status Quo Scenario

This Scenario projects an increase in overall demand of approximately 4% to 5% per year or a total increase of over 28% between FY2016 and FY2022. This Scenario does not include any significant new policies to mitigate the demand growth nor does it include any proposed fare increase above the current $2.00. The major elements of this Scenario are:

- Projected total increase in overall demand of over 28% between FY2016 and FY2022.
- No improvement in on-time performance.
- Increased risk of ADA non-compliance.
- No increase in fares throughout the PGMS horizon.
- Core Service Elements:
    - Some increase in TheHandi-Van service to accommodate a portion of the increase in trips.
    - No increase in the use of Supplemental Providers reflecting limitations on overall capacity at existing levels.
    - Significant increase in the use of Agency-Provided Trips.

Fare Increase Scenario

This scenario (and the Fare Increase and Improved On-Time Performance scenario) implements an actual demand management strategy through the introduction of a fare increase in conjunction with the service delivery mix options associated with the Status Quo Scenario. This would result in a ***dramatic reduction*** in overall paratransit demand.

The Fare Increase Scenario presumes that no major investment will be made in improving the overall quality of service. The combined effect of increasing fares but not service quality would result in an increase in demand of only approximately 9% between FY2016 and FY2022. This Scenario is by far the most aggressive in addressing the projected growth in the paratransit system. The major features of this scenario are:

- Projected total increase in overall demand of over 9% between FY2016 and FY2022.
- No improvement in on-time performance.
- Continued compliance with FTA ADA standards.

- Increase in fares in $.50 increments to $4.00 during the five-year study period.
- Containment of overall costs at near existing levels through the study period.
- Core Service Elements:
    - Containment of TheHandi-Van service at approximately existing levels.
    - No increase in the use of Supplemental Providers.
    - Significant increase in the use of Agency-Provided Trips.

Improved On-Time Performance Scenario

The Improved On-Time Performance Scenario is the most ***dramatic expansion*** alternative. It assumes that there would be no introduction of significant demand management strategies, specifically a fare increase. Instead, it is based upon heavy investment in improved service in an effort to ensure continued ADA compliance. In the period between FY2016 and FY2022, an overall increase in paratransit demand of **61%** is projected. A summary of key factors in this scenario follows:

- Improvement from an effective service delivery window in FY2016 of 45 minutes down to an effective window in FY2019 of 30 minutes, which means a significant increase in the volume of trips provided with the much shorter window.
- Projected total increase in overall demand of over 61% between FY2016 and FY2022.
- No increase in fares during the five-year study period.
- Continued compliance with FTA ADA standards.
- Core Service Elements:
    - Dramatic increase in the size and budget of TheHandi-Van program.
    - No increase in the use of Supplemental Providers.
    - Significant increase in the use of Agency-Provided Trips.

Core Service Delivery Considerations

Several other factors related to the Core Elements and that may be significant relative to the overall cost of the program are considered in the PGMS. Others which involve features that require study beyond that possible in the context of this Study are listed below, though not in an implied order of importance or cost:

- Facility expansion requirements: Three of the four scenarios require consideration of future vehicle storage, maintenance, and administrative expansion. The Status Quo Scenario projects a TheHandi-Van fleet size of 207 vehicles by Year Five of the PGMS. This is a number greater than can be accommodated at the current Middle Street and Pearl City locations. Both the Fare Increase/On-Time Improvement and the On-Time Improvement Scenarios require larger facilities, especially the latter at a total Year Five fleet size of 290. It is recommended that a study of facility expansion options should be initiated soon after adoption of the PGMS.
- Supplemental Provider issues: The City should undertake a study to assess options for the expansion of the accessible fleet for Supplemental Providers. Whether direct public investment or incentives for private investment by provider companies, a means should

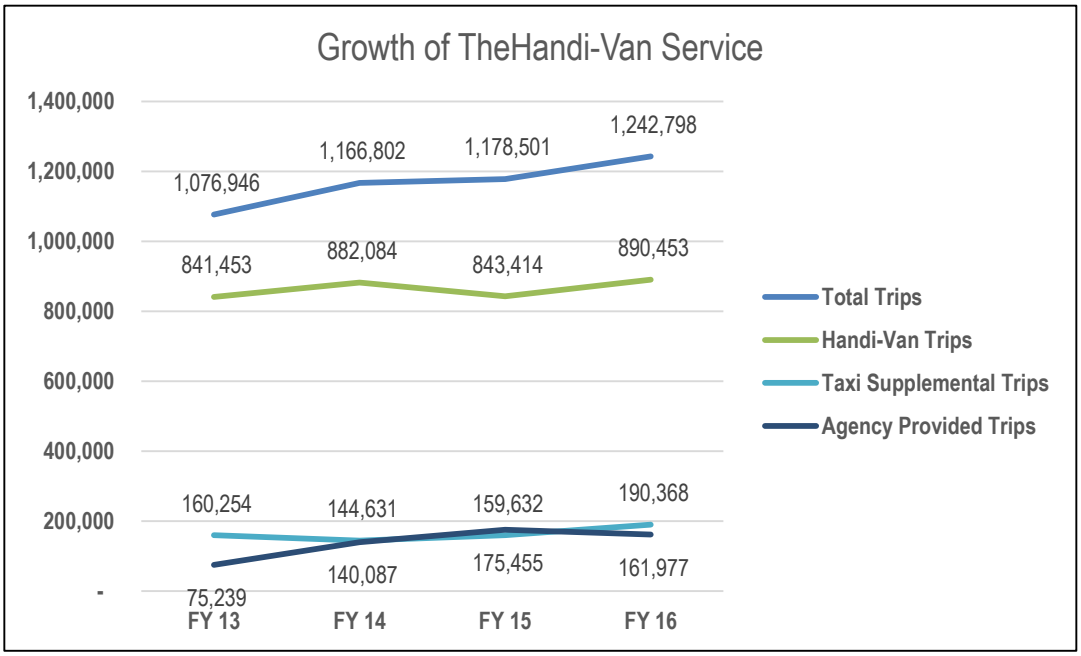
be identified to stimulate the addition of accessible vehicles to the supplemental provider fleet.

- Agency-Provided Trips Expansion: The application of federal transportation regulations to human service agencies can introduce technical challenges that could limit expansion. Centralized management of the Agency-Provided Trips program could stimulate expansion while further refining the professionalism of the service delivery.

TheHandi-Van Service Expansion

The increase in demand for paratransit service in recent years has largely been served by an increase in the use of supplemental providers. Growth in this area has allowed TheHandi-Van to deliver service to an expanding population while experiencing minimal internal growth. Figure 4.1 below illustrates the growth in TheHandi-Van and the comparable growth in Supplemental Service and Agency-Provided Trips from FY2013 through FY2016. As recently as FY2014, OTS operated a fleet of 170 vehicles. With the delivery of 99 new vehicles in 2014, the fleet was expanded to 180 vehicles. This increase in fleet size was the first significant growth in TheHandi-Van fleet in many years.

Figure 4.1 Growth of TheHandi-Van Service 2013 - 2016



Source: Nelson\Nygaard

While there was no fleet expansion between FY2015 and FY2016, the operating budget for TheHandi-Van was increased from $38 million in FY2015 to $45 million in FY2016 (see Chapter 5, Core Service Finance Plans). This increase allowed for the provision of 58,994 additional service hours. This service increase has been accomplished with the same fleet by operating existing vehicles on the street for longer duration. In order to achieve this change in service delivery, OTS expanded its use of longer driver shifts while adding additional personnel to the driver ranks. Though this approach has positive effects in greater service deployed, it is limited

by the fleet size and places additional wear on the vehicles. This Study proposes an incremental expansion of TheHandi-Van fleet through the five-year study horizon in the Status Quo and the Fare Increase and On-time performance scenarios. Substantial increases will be needed for the On-Time Performance Only scenario while there will be a decrease in the Fare Increase Only scenario.

TheHandi-Van Operational Issues

As the largest element of the Core service mix, the organization of OTS can have a significant impact on the overall efficiency of the operation. Techniques used to manage operations on the street, to conduct business associated with system management, or to effectively utilize technical tools can all affect system efficiency.

This section of the PGMS reviews a number of organizational issues related to TheHandi-Van. It is not meant to be an exhaustive list, but instead highlights some of the most significant issues and offers strategies for refinement.

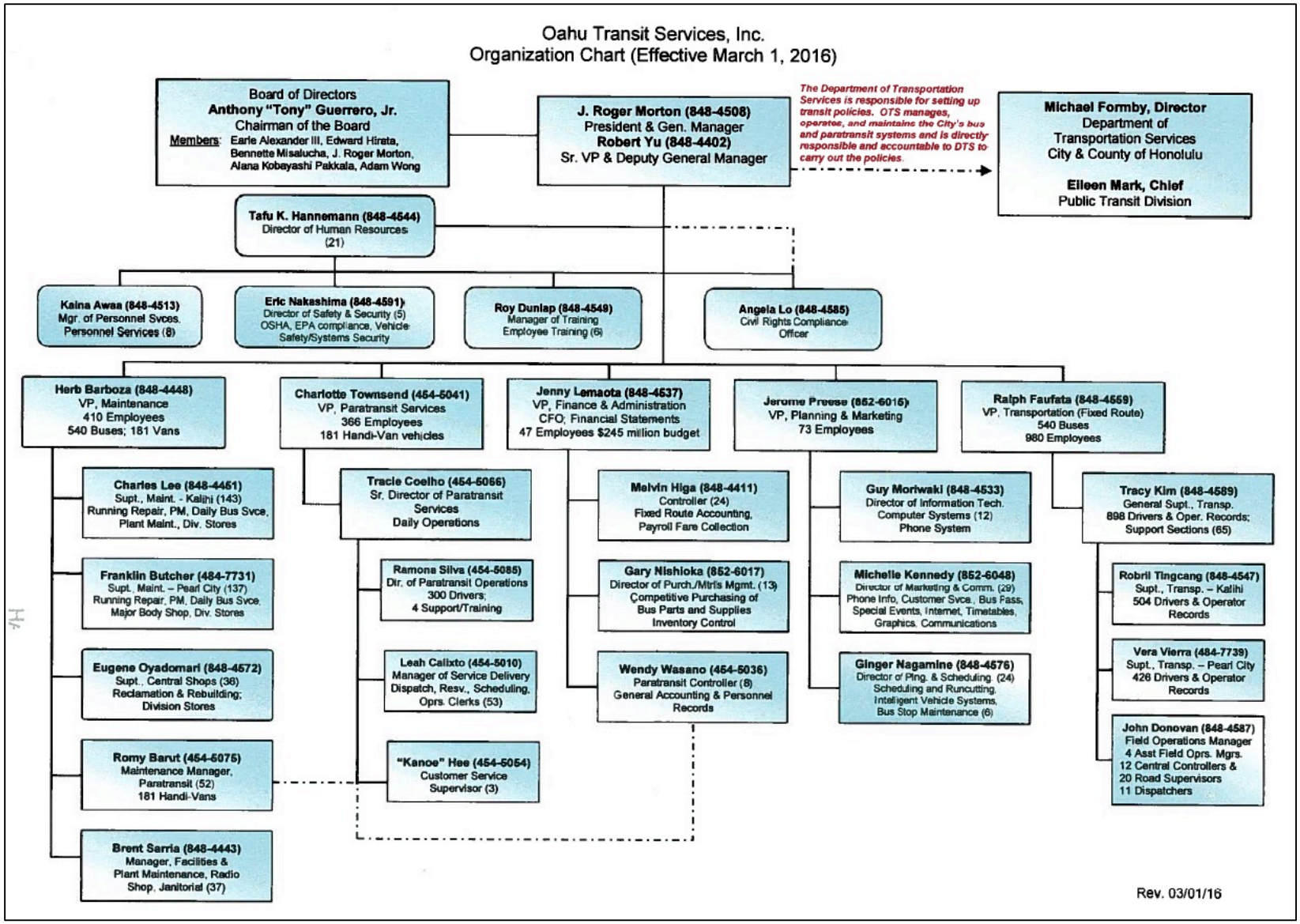
Organizational Structure of TheHandi-Van

TheHandi-Van is an operating division of Oahu Transit Services, Inc. Under this structure, the Vice President (VP) of Paratransit Services is responsible for all day-to-day operations of TheHandi-Van including services operated by supplemental providers. The VP of Paratransit Services reports to the President and General Manager of OTS. Various support services are provided to TheHandi-Van and to TheBus through administrative offices which also report to the General Manager. These support functions include human resources, maintenance services, finance and administration, and planning and marketing. The complete OTS organization chart as of March, 2016, is included as Figure 4.2.

TheHandi-Van portion of the OTS organization as of March 1, 2016 included 364 employees. The Division is managed by the VP of Paratransit Services who is supported by a Senior Director of Paratransit Services. Three Managers or Supervisors provide direct oversight of the following functions:

- Paratransit Operations: Oversees 300 drivers, 4 Support and Training staff
- Service Delivery: Oversees 53 Service Delivery personnel responsible for reservations, dispatching, and scheduling
- Customer Service: Oversees 3 Customer Service Representatives.

Figure 4.2 OTS Organization Chart



Staffing

As the scope of the paratransit operation increases with the growth in demand for service, so too will the need for additional qualified staff to manage the volume of activity. Using the projections from the Fare Increase and Improved On-Time Performance Scenario, Figure 4.3 displays the base staffing level using FY2016 data along with a projection of staff growth related to volume for years 2018 to 2022. Future growth estimates are based upon projections of overall trip numbers and call volume and the corresponding staffing levels. The staffing levels provided in Figure 4.3 serve as general guides to OTS management to plan for staff growth and associated needs for office space, furniture and computer equipment, and other ancillary needs.

The future number of drivers, reservationists, dispatchers, schedulers, etc. are projected to grow as the volume of activity increases, as well as the need for some management and technology positions. Interaction with TheHandi-Van management team suggests that current management is barely adequate to maintain existing operations and that there is a critical need for dedicated Trapeze expertise on staff. As the size of the organization grows to meet the increasing demand, the need for additional management depth will become even more apparent. Although the cost estimates for personnel expansion are based upon measures such as cost per trip and presumed to include increases in staffing as part of the underlying calculation, it is important to have an approximation of staffing needs for future planning purposes.

All of TheHandi-Van functions are housed at the operations base at 611 Middle Street. This facility is separated from but adjacent to the OTS headquarters and fixed-route operations and maintenance base located at 811 Middle Street. Other support functions are located at the OTS headquarters facility.

Under the existing structure, two key TheHandi-Van support functions, maintenance and finance, are located at the Paratransit Services facility. These key support functions do not report directly to the VP of Paratransit Services. A total of 52 maintenance personnel and the Paratransit Superintendent of Maintenance are located at the Paratransit facility. They do not report to the VP of Paratransit Services, but to the VP of Maintenance located at headquarters. Similarly, seven finance staff members plus the manager are located at the Paratransit facility and report to the VP of Finance and Administration, also located at headquarters, and do not report to the VP of Paratransit Services.

In the day-to-day operation of paratransit services there is a great deal of interaction between operations (driver deployment, etc.) and maintenance. Where vehicle availability is critical to on-time performance or other immediate performance issues, the separation of oversight of these two critical functions could create communication issues and also affect prioritization of key logistical components. Potential communication and accountability issues could possibly be avoided by the consolidation of management under the VP of Paratransit Services. Similarly, financial management of a $45 million per year paratransit budget should be a vital responsibility

of the VP of the Paratransit Division. In order to fulfill that responsibility it may be more efficient to have the finance personnel who oversee all routine financial matters report to the Division VP. The key concept with this organization structure is to place full accountability under the senior executive who is otherwise tasked with overall management.

Figure 4.3 Projected Staffing Levels (Fare Increase and Improved On-Time Performance Scenario)

	Base	Projections				
	FY2016	FY2018	FY2019	FY2020	FY2021	FY2022
Total HV & Supplemental Trips	1,242,798	1,424,596	1,538,301	1,521,996	1,517,071	1,579,682
TheHandi-Van Vehicles	180	187	207	207	207	207
On-Time Window	45	35	30	30	30	30
Fare	$2.00	$2.50	$3.00	$3.50	$4.00	$4.00
Vice President of Paratransit Services (direct oversight)						
Senior Director of Paratransit	1	1	1	1	1	1
Director of Paratransit Operations	1	1	1	1	1	1
Drivers	300	362	398	398	398	398
Support/Training	4	4	5	5	6	6
Manager of Service Delivery	1	2	2	2	3	3
Dispatcher	14	16	17	17	17	18
Reservationist	32	37	40	39	39	41
Scheduling, Operations Clerk	7	8	9	9	9	9
Customer Service Supervisor	1	1	1	1	1	1
Customer Service Representatives	3	3	3	3	3	3
Subscription Trip Manager		1	1	1	1	1
Trapeze Specialist		1	1	1	1	1
TOTAL	364	437	479	478	480	483
OTS Management (direct oversight)						
Paratransit Controller	1	1	1	1	1	1
General Accounting & Personnel Records	8	8	8	8	8	8
Paratransit Maintenance Manager	1	1	1	1	1	1
Maintenance Staff	52	63	69	69	69	69
TOTAL	62	73	79	79	79	79
GRAND TOTAL	426	511	559	558	560	563

Source: OTS and Innovative Paradigms
Trapeze Specialist: Emphasis on street routing and scheduling

Impact of Labor on a Paratransit Growth Management Study

The majority of employees in larger transit and paratransit operations around the U.S. are represented by labor unions. The structure of the representation varies greatly from one location to another but some form of representation is common. Typically, a Collective Bargaining Agreement (CBA) is negotiated between management of the transit agency and the labor union to cover a period of several years. The period covered by a CBA also varies greatly and is commonly influenced by local factors such as the history of wage adjustments, the volatility of the local economy, or the historical relationship between the parties to the agreement.

This analysis reviews some of the most critical of the provisions of the labor agreements upon the PGMS and offers strategies regarding current or future direction. Labor agreements typically set out all aspects of compensation for the covered employees. These provisions can be very complex and often are manifest in a variety of clauses throughout the agreement.

The CBA typically covers such influential factors as:

- Relationship of employee groups to each other and to management,
- Wages
- Benefits
- Work rules

Each of these major contract subjects can have a major impact on the ultimate viability of a PGMS. Some examples include the following:

- As there are multiple bargaining units within the OTS structure, their interrelationship can affect the ability of employees to move into different job functions.
- Wages are the single largest cost factor in paratransit service delivery. Management of the wage structure is critical to meeting the growth objectives of a growth management study.
- Benefits have both short-term and long-term implications regarding the viability of a paratransit operation. Short-term costs are an immediate year-to-year budget issue. Long-term costs such as pension or retiree health benefits are costs that extend beyond immediate budget cycles.
- Work rules address such issues as maximum driving hours, limitations of work assignments to specific job classifications, and use of technology. Work rules can have a major impact on the cost of operations. This is especially true in paratransit operations where work shifts can vary from day to day depending upon customer ride requests. The management of work assignments to accommodate such factors can have significant financial implications.

It is essential that labor issues be given appropriate consideration. Because labor including all job classifications is the single largest component of cost of the operation, the approach to management of the costs that are covered in a CBA is critical to the achievement of any outcome

of the planning process. If, for example, a general rate increase is forecast in the Study but that rate cannot be achieved in the negotiation of a CBA, then essential cost forecasting may be inaccurate. Just as importantly, if such factors as on-time performance depend upon certain labor rules regarding driver assignment, then achievement of those factors must be anticipated in the negotiation of a future labor agreement.

See Appendix F for more information on the impact of labor on the PGMS.

Technology Issues

TheHandi-Van has been challenged with the use of technology for some time. This is particularly true regarding its use of the PASS reservation and scheduling system obtained from Trapeze Software, which has been in place in Honolulu since the late 1990s. In 2014, an effort was made to utilize the software's capability more fully. During this period, a number of technical issues regarding the use of the Trapeze software were identified. They are not enumerated here in order to maintain a focus on major policy and funding issues. However, certain system elements do rise to the level of major planning considerations through the five-year study horizon. The most important of these are enumerated below:

Technical Expertise

The participation of many technical advisors during the preparation and implementation of the new scheduling approach in 2014 revealed that TheHandi-Van staff was lacking in the necessary level of expertise to make full use of the features of the Trapeze. Given this, OTS relied heavily on outside experts including Trapeze software staff members to make adjustments to the system to reflect the realities of the Honolulu environment. Most major U.S. transit systems using the Trapeze have some high level in-house expertise to accomplish this. Because Trapeze employees are not available on a constant, on-going basis, major transit systems that use Trapeze are expected to have their own dedicated staff that is proficient in the use of Trapeze to fully apply the features of the system. Although OTS has made some effort to develop this capability since October 2014, to date the high level technical expertise regarding the use of Trapeze has not been added to TheHandi-Van. In order to move the organization forward, in-house Trapeze expertise is critical.

Preparing TheHandi-Van Staff for Technology Refinements

In order to make most effective use of a complex system such as Trapeze, training must be provided to all of the users of the system for their particular role in applying the tools. Although training was carried out in 2014, and more has been conducted to some degree since that time, there must be a commitment to the full utilization of the Trapeze technology through all levels of the organization. A demonstrated commitment to its use from the General Manager level down would strengthen the emphasis on use of the system. A level of trust must exist between senior management and line staff that the reasons for using the technology, though perhaps not fully understood at their level, are presumed to be correct and that commitment must follow.

OTS has noted that cultural subtleties with the Honolulu staff may have been overlooked in previous Trapeze training efforts. The process might have been more successful if greater reliance had been placed on local train-the-trainer staff to provide the necessary system training and commitment in order to achieve total buy-in by line staff to the use of Trapeze. Future efforts such as this should include much greater participation by all levels of OTS management with less reliance upon technical support by outside advisors.

Understanding "Unscheduled Trips" and "No Solution Found"

The *Audit of Paratransit Services, March 2016* identified both "unscheduled" trips and "no solution found" trips as major issues in the paratransit scheduling process including with the use of Trapeze. A full discussion of these features of the Trapeze system is beyond the level of detail for the PGMS. However, it is important to establish the role that these features play in the greater context of effective use of Trapeze. The presentation of these two issues by the Auditor could be inferred to have suggested that customers were actually told that there was "no solution found" to their trip request or that their trip was "unscheduled." It is not a violation of the ADA for a reservationist to accept a trip request from a demand caller and place that trip on a No Solutions Found or Confirmed but Unscheduled list. The **ADA Circular** states:

> *Accepting a trip request during a reservation call and scheduling the trip later internally is not the same as placing a trip request on a prohibited waiting list. It may not always be possible for an agency to identify a scheduling solution during the course of a reservations call. In these instances, as long as the call-taker accepts the trip request and confirms the requested time with the rider, this is not a waiting list. Transit agencies that use this approach refer to these trips as "confirmed but unscheduled."*
>
> *FTA 4710.1, November 4, 2015, 8.5.2 Avoiding Capacity Constraints*

"Unscheduled" and "No Solution Found" are internal outcomes of the use of a paratransit scheduling system that should never become known to the TheHandi-Van rider. When reservation calls are taken, callers should not hang up without knowing that they have a ride scheduled on TheHandi-Van, even if the Trapeze system has not found a solution for their requested trip. "No solution found" simply means that the scheduling staff or dispatchers, instead of Trapeze, will have to assign the trip in order to accommodate the rider's request. This occurs behind the scenes from the public.

Reservationists should be instructed regarding feedback to a caller in such situations. This sort of training should be part of the on-going development of TheHandi-Van staff and include scheduling and dispatch staff who assign trips when the computer system cannot find a solution. In any case, riders always should be assured that they do have a scheduled trip within the stated pickup window per their request.

The fact that the Trapeze system as it is used in Honolulu leaves a high number of trips unscheduled or with no solution found can result from at least two factors:

- Need for parameter setting refinement: The Trapeze scheduling system offers many parameters that allow accurate modelling of local transit conditions. The tighter that the parameters are set, the less likely that a run will be found to accommodate a particular trip request. Adjustment of parameters (or violation sets as a technical component) is a complicated process that requires sophisticated Trapeze knowledge. In the absence of a high level of sophistication in-house, TheHandi-Van has tended to rely on periodic technical support from Trapeze staff to manage such refinements. Regular refinements to these parameters by sufficiently skilled OTS staff would allow Trapeze to automatically schedule trips as it is intended to do without subsequent manual intervention.

- Inadequate service availability: In the absence of sufficient capacity, the scheduling system is very likely to find no solutions to a number of trip requests. This phenomenon was highlighted in the aftermath of the real-time scheduling implementation in 2014, which placed any long-standing on-time and other performance issues into the spotlight. Though there was some return to the use of old scheduling methods as a result, the most dramatic result was the increase of TheHandi-Van budget by $7 million in the following fiscal year (FY2016) for additional service hours to increase the system's capacity.

While a large budget increase in FY2016 went some distance to address the capacity problem of TheHandi-Van, technical issues with the use of Trapeze have not been fully resolved.

Subscription Service Management

Subscription rides make up a very large percentage of overall TheHandi-Van service. Other transit systems with large subscription rider populations typically dedicate a staff person to the management of the subscription rides. This is largely a Trapeze management function where the Subscription Scheduler adjusts subscription pickup times, assigns subscription schedules to new riders, monitors subscription schedule adherence, etc. This is a vital function in a large paratransit operation.

Subscription rides are typically assigned to templates in the Trapeze scheduling system. In 2014, substantial emphasis was placed on the need to refine the subscription templates to reflect actual pickup and drop-off times. OTS has reported that additional effort has been devoted to this since then. However, a review of manifests indicates that a large number of subscription rides are still scheduled "on the hour" rather than with actual pickup times. The effort to refine the subscription templates to determine actual pickup times should continue to completion. When changes to subscription pickup times are made in the system as "permanent" schedule revisions, the affected passengers should be contacted to inform them of the new times. This should be part of the routine management of the subscription service.

Given the size of the subscription rider population at TheHandi-Van, it is recommended that OTS assign one full-time scheduler to oversee subscription service management.

Transit Management Service Contract Restructuring

City ordinance requires the City to contract with OTS to operate both TheBus and TheHandi-Van. The agreement establishes the basic management structure for the organization. The agreement with OTS covers the cost of the two senior management executives and specifies certain management and reporting responsibilities. It goes on to say that "OTS will be directly responsible and accountable to the Director of the City Department of Transportation Services." The cost that is directly provided for through this agreement is approximately $470,000 per year including salaries and benefits for the two executives and other associated costs. It does not, however, cover the remaining operating costs of the paratransit system. The remaining costs of the approximately $46,000,000 annual budget (FY2016) are reimbursed to OTS by the City on a pass-through basis.

The *Audit of Paratransit Services, March 2016*, raised issues about this overall structure focusing on the fact that both fixed-route and paratransit services are managed by the same entity and that paratransit services specifically are not competitively procured. The pass-through cost model that is presently used to manage paratransit services does not include performance requirements of OTS and in particular does not contain any incentives, penalties, or other consequences relating to financial management. This contract structure has made it difficult for DTS to exercise the level of oversight and control over OTS that is customarily seen in well-managed transit systems.

This type of service delivery contract is rare nationally. It is not common for there to be a contract with a management entity that includes no responsibility for attainment of financial objectives. Most contracted paratransit services in other communities, including most of the size of Honolulu, provide for a contractor to be fully responsible for financial management. Portland and Seattle are examples of systems that use the full-contracting model.

Other systems that had a Honolulu-type model have restructured their service delivery approach in recent years to eliminate the "pass-through" of costs that minimizes accountability. The City of Vallejo, California made the change from a pass-through to a full contract model and has been very pleased with the results. The agency has saved money and increased accountability for service delivery.

A simple example of the liability associated with the pass-through approach is in the major cost component of staff or driver wages. As nearly all levels of employees of TheHandi-Van are represented by unions, bargaining for wages and benefits is a routine periodic process. OTS is responsible for negotiating the agreements. Yet the money being negotiated is not part of the OTS agreement with the City. Instead, OTS negotiates an agreement and passes through 100% of the cost of that agreement to the City for payment. There is no incentive for OTS to contain this cost.

As a follow up to both the *Audit of Paratransit Services* and this PGMS, the City should undertake a thorough analysis of the issues associated with a potential restructuring of the paratransit service delivery model. In particular, the City should look to other examples of models from across the U.S. that include much greater financial accountability. These alternative models would include the contracting of the entire paratransit operation as a package for operations management. Under such a model, the assets, including facilities and operating equipment would remain the property of the City. A contractor would be retained to manage operations and the agreement for that responsibility would contain the necessary provisions for accountability to ensure that costs are strictly controlled.

Fleet and Facilities Plan

A capital plan is required in order to effectively manage further growth of paratransit services and to properly budget for anticipated growth. Such a plan provides guidance on the nature, level, and timing of investments in equipment and facilities necessary to accommodate anticipated system growth. As with all other aspects of the PGMS, capital planning extends beyond requirements related specifically to TheHandi-Van. While that component is substantial and critical, a commitment to the use of other cost-effective providers must also account for capital needs. In particular, the expanded use of human service agencies for paratransit service delivery requires consideration of the capital needs of those organizations.

The capital plan developed for the PGMS addresses the on-going capital requirements of the fleet of vehicles utilized by all providers in responding to portions of the overall demand, and includes a Fleet Management Plan as a major component. Another element of the capital plan is the other facilities that comprise the necessary infrastructure to provide service. Facilities necessary to park, maintain, manage, and operate multiple fleets are an essential component of the capital plan. As noted earlier, the PGMS provides vehicle and staffing projections and recommends a future facilities study to accommodate the staff and vehicles needed to meet the projected growth in paratransit demand.

Fleet Management Plan

A Fleet Management Plan begins with a roster of vehicles with vehicle type, age, mileage accumulation, and possibly fleet condition. It is essential to create a fleet replacement schedule for OTS and the human service agencies providing paratransit service. A comprehensive fleet plan includes fleet mix and replacement, policies, maintenance programs, funding, and life-cycle cost considerations.

DTS has historically purchased cutaway-type vehicles for the paratransit fleet. With the exception of 9 Uplander mini-vans purchased in 2008, the fleet has consistently been based upon the cutaway size vehicle. While there are benefits in having a consistent vehicle size for purposes of assignment flexibility, maintenance uniformity, and driver familiarity, there may also be limitations to overall service deployment in a single vehicle type. On the island of Oahu, there is terrain that

makes accessibility difficult in some locations for a large size cutaway. This has been handled to date either through assignment of the Uplander subfleet or through the use of taxi contractors. Consideration has been given recently to experimenting further with the purchase of small vehicles, and a new order of small vehicles is in process as of this time. Expanded use of this size vehicle will depend upon the successful deployment of this new subfleet.

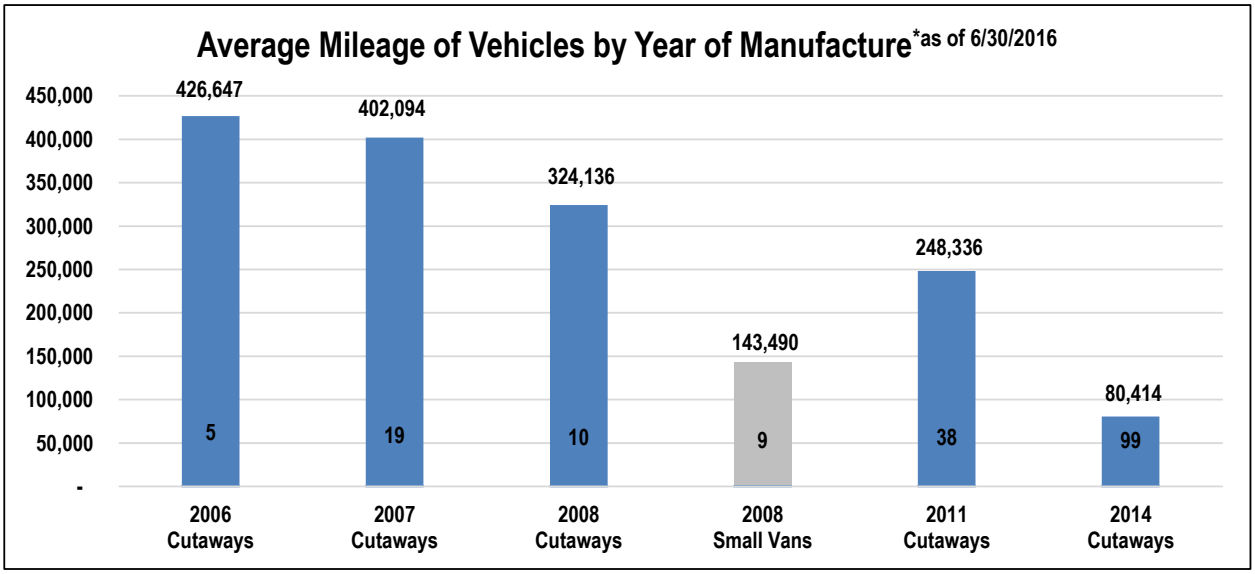
A number of paratransit systems on the Mainland have made extensive use of small vehicles for many years, and other transit systems have experimented with them. Several operators were contacted to obtain feedback on the experience. Some systems that had experimented with small vehicles, including sedans, have since made the decision to return to larger vehicles. Systems in Spokane, WA, Sacramento, CA, and the San Francisco Bay Area (Eastbay Paratransit) have either discontinued use of sedan-type vehicles or have significantly reduced dependence on them. Typical reasons reported for such a shift were that the small size limited capacity and had a negative impact on productivity; the vehicles have a much shorter life span than larger heavier duty vehicles and require more frequent replacement; anticipated use for difficult locations can be as easily fulfilled by contractors with small vehicles (e.g. taxi companies and TNC's).

The use of the new small fleet in Honolulu should be carefully studied to add local factual detail to the consideration of increased use of such vehicles. Decisions as to assignment should be carefully monitored, statistics on that subfleet should be analyzed (e.g. productivity vs. cutaway fleet, average trip length, type of passenger carried, etc.). This data should also be compared to data covering the use of supplemental providers for similar circumstances. Such an analysis could then inform the decision as to continued purchase of small vehicles.

Current OTS Revenue Fleet

OTS operates 180 paratransit vehicles consisting of nine 17-foot Chevrolet Uplanders and 171 25-foot El Dorado E450 Aerotechs. The average mileage accumulation for each vehicle in the fleet in 2015 was 34,668 miles, however this increased to approximately 45,000 miles per vehicle in FY2016. Figure 4.4 shows the vehicle breakdown of Uplanders and cutaways by year of manufacture and the average mileage of those vehicles, as of June 30, 2016.

Figure 4.4 OTS Fleet by Year of Manufacture and Mileage

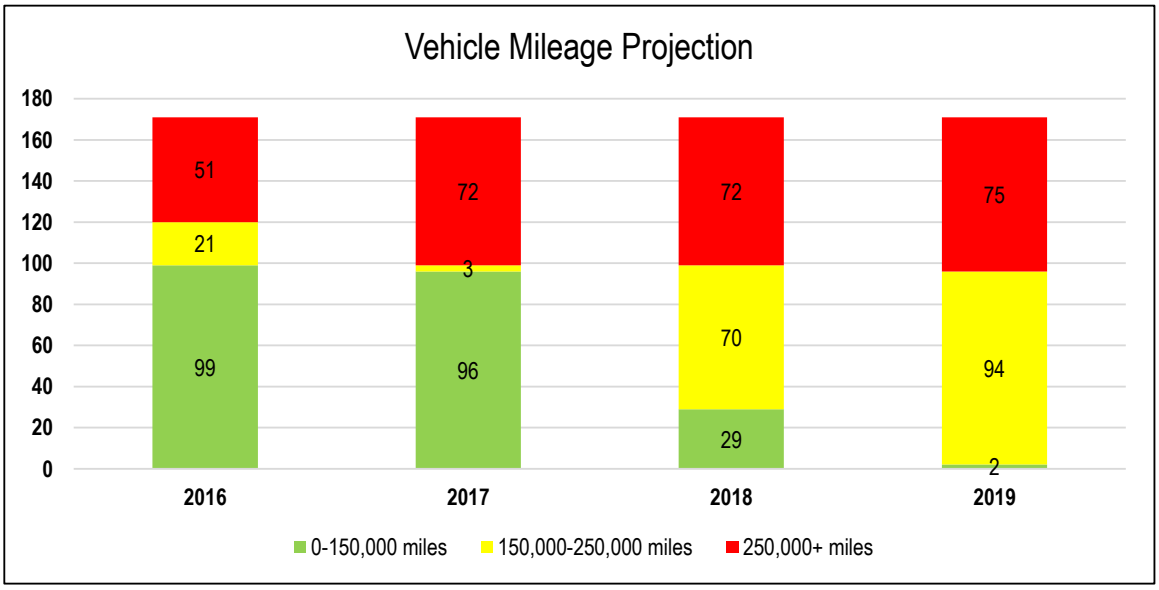


Source: OTS

Figure 4.5 below displays cutaways by mileage as of June 30, 2016. Years 2017-2019 are projections based on 2016 mileage for each vehicle. Currently, OTS is operating 51 vehicles over 250,000 miles. If no changes are made to the current OTS fleet, and no other factors such as increased or decreased ridership occurs, by 2018 OTS will have 72 vehicles with more than 250,000 miles on them.

As shown later in this chapter, fare increases can mitigate investment in the fleet by reducing the number of vehicles required for service. Alternately, if there is no fare increase, a larger investment will be required for vehicles and service.

Figure 4.5 OTS Cutaway Mileage Projections



Source: OTS, Innovative Paradigms

Fleet Replacement Schedule

The preparation of a replacement schedule for TheHandi-Van has been a somewhat incomplete endeavor by DTS in recent years. This Fleet Management Plan is intended to get the process back on a consistent level and to guide the dedication of funds necessary to maintain fleet quality. Similarly, the increased reliance on human service agencies will bring with it necessary consideration of the replacement needs of their fleets.

Though some of the vehicles in the Honolulu paratransit service delivery mix are not federally-funded by the City (e.g. The Arc and SECOH), federal standards for fleet replacement serve as an appropriate guide for a fleet schedule. In 1985, the FTA established the minimum life requirements for transit vans purchased with federal funds in order to ensure federal taxpayers obtain an adequate return on their investment. The minimum life requirements for a light-duty mid-sized bus, such as the cutaway vans used by TheHandi-Van, is 5 years or 150,000 miles, whichever comes first. There has been negligible change in the past 30 years of these minimum life expectancies. In 2007, the FTA conducted a study to reassess the minimum-life policy by looking at the actual lifetime of transit vehicles across the country. The study found that, on average, transit vans are retired between one to three years after the minimum service-life requirement has been met. No formal replacement interval has to date been adopted by the City. Instead, various standards appear in existing fleet rosters.

The data for TheHandi-Van indicate that typical replacement occurs long after a normal service life. This is due to a number of factors, one of which is a lack of firm commitment to a replacement program. In the absence of official standards, replacement occurs on an *ad hoc* basis, typically as funding is available. An unfortunate factor in the recent replacement of vehicles has been the protest of procurements by a local vendor which has added greatly to the time required to complete the purchase process. A final factor in the late replacement of vehicles is the lengthy time frame that surrounds the City procurement process. The City purchase process requires approximately two years to complete.

The current multi-step process is shown on the following page. This process should be revised to include paratransit operations staff from both OTS and DTS to ensure that the type of vehicles procured continue to reflect present operational needs.

Figure 4.6 Vehicle Procurement Timeline

Timeline	Action
MONTHS 1 – 6	Annually, DTS Facilities and Equipment Branch, in collaboration with OTS, reviews vehicle age and mileage to determine which vehicles need to be replaced. During this process, DTS also determines if additional vehicles are needed due to factors such as increased ridership or changes in service policies.
	DTS confers with OTS to establish which kind of vehicles need to be included in the procurement. OTS operates mostly cutaway vans but also has a small fleet of mini vans. Questions considered during this step include: o What type vehicle do the riders need? o What type vehicle is most effective for the system's routes? o Are there specific service area characteristics that impact operations? o What is the budget? o What is currently on the market?
	Once the vehicle type and quantity is determined, DTS submits a funding request application to the Department of Budget and Fiscal Services (BFS).
MONTHS 7- 8	After financial approval, the DTS Facilities and Equipment Branch establishes the specifications for the vehicles to be included in the procurement. Determining vehicle specifications can be time consuming, as there are many federal, state and local requirements to consider. Common categories included in the specifications are chassis, body (exterior and interior), and equipment (standard and special).
	The BFS's Purchasing Division composes the request for proposals that includes the purpose of the vehicles, all requirements including vehicle specifications, instructions for responsive bids, the closing date for submitting bids, and DTS' evaluation process.
	The Purchasing Division releases the procurement to qualified vendors.
MONTH 9	The Purchasing Division allows 1 month for vendors to respond to the procurement.
MONTHS 10 – 12	DTS Facilities and Equipment Branch reviews and evaluates all qualified bids and conducts a pre-award audit and the Buy America audit/certification. The Buy America Certification is required by the FTA to verify that sixty percent of the parts supplied in the vehicles are made in America and that the vehicle's final assembly takes place in America. Otherwise, the manufacturer must provide a Buy America exemption certificate.
MONTHS 13 - 24	Once the vendor is selected, DTS Facilities and Equipment Branch issues a notice to proceed to the Vendor. DTS has award authorization and no additional approval is required.
	Vehicle manufacturer sets the production date and begins building vehicles.
	When using FTA funds, if an agency purchases more than 10 vehicles, an in-plant inspection is required during the production phase.
	OTS receives delivery of vehicles, inspects the vehicles and finalizes the acceptance of delivery.
	DTS Facilities and Equipment Branch performs a post-delivery audit after OTS' initial inspection. When inspecting the vehicles agencies are ensuring all the specifications outlined in the procurement are met.
	Once all vehicles are delivered, pass inspections and are accepted, the contract closes.

Given historical experience with the procurement process, a standard for replacement of cutaway buses of seven (7) years or 250,000 miles is recommended for TheHandi-Van fleet. Similarly, a replacement standard for small vehicles of five (5) years or 150,000 miles is recommended. This supports the fact that historical replacement has exceeded federal standards but also suggests that vehicles should be cycled out of the fleet at an earlier age than has been typical.

The schedules in Figures 4.7 through 4.10 are based upon the seven-year criteria for each of the four scenarios presented in the PGMS. While extending the life beyond seven years can certainly slow the pace of investment in new vehicles, it has the negative effect of reducing vehicle availability due to keeping high-maintenance assets in service longer than is justified on a typical cost/benefit basis.

FY2023 data is shown for purposes of procurement planning in FY2022.

Figure 4.7 TheHandi-Van Fleet Plan – Fare Increase and Improved On-Time Performance

FARE INCREASE AND IMPROVED ON-TIME PERFORMANCE												
Budget Year	In-Service Date			FLEET MIX BY FISCAL YEAR								
				2015	2016	2017	2018	2019	2020	2021	2022	2023
2007	8/27/07	Cutaway	25'	18	18	1	-	-				
2008	11/12/08	Ford	25'	10	10	5	-	-				
	11/12/08	Chevy	17'	15	15	-	-	-				
2011	5/1/11	Ford	25'	38	38	38	19					
	11/27/12	Coach	27'	1	-	-	-	-				
2014	5/30/14	Ford	25'	99	99	99	99	99	99	66	33	
2015					-							
2016		Replacement Cutaways										
2017		Replacement Smaller Vans				15	16	16	16	8		
		NEW Smaller Vans				1						
		Replacement Cutaways				27	27	27	27	27	27	27
		NEW Cutaways										
2018		Replacement Cutaways					25	26	26	26	26	26
		NEW Cutaways					1					
2019		Replacement Cutaways						19	39	39	39	39
		NEW Cutaways						20				
2020		Replacement Cutaways							0	0	0	
		NEW Cutaways										
2021		Replacement Smaller Vans								8	41	41
		Replacement Cutaways								33		
		NEW Cutaways										
2022		Replacement Smaller Vans									8	41
		Replacement Cutaways									33	
		NEW Cutaways										
2023		Replacement Smaller Vans										
		Replacement Cutaways										33
		NEW Cutaways										8
Total Vehicles				181	180	186	187	207	207	207	207	215

Source: DTS and OTS

Fleet Plan is based on a seven-year cycle, Therefore mileage is not taken into consideration.

Figure 4.8 TheHandi-Van Fleet Plan – Status Quo Scenario

STATUS QUO												
Budget Year	In-Service Date			FLEET MIX BY FISCAL YEAR								
				2015	2016	2017	2018	2019	2020	2021	2022	2023
2007	8/27/07	Cutaway	25'	18	18	1	-	-				
2008	11/12/08	Ford	25'	10	10	5	-	-				
	11/12/08	Chevy	17'	15	15	-	-	-				
2011	5/1/11	Ford	25'	38	38	38	19					
	11/27/12	Coach	27'	1	-	-	-	-				
2014	5/30/14	Ford	25'	99	99	99	99	99	99	66	33	
2015					-							
2016		Replacement Cutaways										
2017		Replacement Smaller Vans				15	16	16	16	8		
		NEW Smaller Vans				1						
		Replacement Cutaways				27	27	27	27	27	27	27
		NEW Cutaways										
2018		Replacement Cutaways					25	25	25	25	25	25
		NEW Cutaways					0					
2019		Replacement Cutaways						19	19	19	19	19
		NEW Cutaways						0				
2020		Replacement Cutaways							0	3	3	3
		NEW Cutaways							3			
2021		Replacement Smaller Vans								8	49	49
		Replacement Cutaways								33		
		NEW Cutaways								8		
2022		Replacement Smaller Vans									8	51
		Replacement Cutaways									32	
		NEW Cutaways									11	
2023		Replacement Smaller Vans										0
		Replacement Cutaways										33
		NEW Cutaways										10
Total Vehicles				181	180	186	186	186	189	197	207	217

Source: DTS and OTS
Fleet Plan is based on a seven-year cycle, Therefore mileage is not taken into consideration.

Figure 4.9 TheHandi-Van Fleet Plan – Fare Increase Scenario

FARE INCREASE											
Budget Year	In-Service Date			FLEET MIX BY FISCAL YEAR							
				2016	2017	2018	2019	2020	2021	2022	2023
2007	8/27/07	Cutaway	25'	18	1	-	-				
2008	11/12/08	Ford	25'	10	5	-	-				
	11/12/08	Chevy	17'	15	-	-	-				
2011	5/1/11	Ford	25'	38	38	19					
	11/27/12	Coach	27'	-	-	-	-				
2014	5/30/14	Ford	25'	99	99	99	99	99	66	33	
2015				-							
2016		Replacement Cutaways									
2017		Replacement Smaller Vans			15	16	16	16	8		
		NEW Smaller Vans			1						
		Replacement Cutaways			27	27	27	27	27	27	27
		NEW Cutaways									
2018		Replacement Cutaways				0	0	0	0	0	0
		NEW Cutaways				0					
2019		Replacement Cutaways					13	13	13	13	13
		NEW Cutaways					0				
2020		Replacement Cutaways						0			
		NEW Cutaways						0			
2021		Replacement Smaller Vans							8	41	41
		Replacement Cutaways							33		
		NEW Cutaways							0		
2022		Replacement Smaller Vans								8	46
		Replacement Cutaways								33	
		NEW Cutaways								5	
2023		Replacement Smaller Vans									0
		Replacement Cutaways									33
		NEW Cutaways									8
Total Vehicles				180	186	161	155	155	155	160	168

Source: DTS and OTS
Fleet Plan is based on a seven-year cycle, Therefore mileage is not taken into consideration.

Figure 4.10 TheHandi-Van Fleet Plan – Improved On-Time Performance Scenario

IMPROVED ON-TIME PERFORMANCE												
Budget Year	In-Service Date			FLEET MIX BY FISCAL YEAR								
				2015	2016	2017	2018	2019	2020	2021	2022	2023
2007	8/27/07	Cutaway	25'	18	18	1	-	-				
2008	11/12/08	Ford	25'	10	10	5	-	-				
	11/12/08	Chevy	17'	15	15	-	-	-				
2011	5/1/11	Ford	25'	38	38	38	19					
	11/27/12	Coach	27'	1	-	-	-	-				
2014	5/30/14	Ford	25'	99	99	99	99	99	99	66	33	
2015					-							
2016		Replacement Cutaways										
2017		Replacement Smaller Vans				15	16	16	16	8		
		NEW Smaller Vans				1						
		Replacement Cutaways				27	27	27	27	27	27	27
		NEW Cutaways										
2018		Replacement Cutaways					25	49	49	49	49	49
		NEW Cutaways					24					
2019		Replacement Cutaways						19	63	63	63	63
		NEW Cutaways						44				
2020		Replacement Cutaways							0	11	11	11
		NEW Cutaways							11			
2021		Replacement Smaller Vans								8	53	53
		Replacement Cutaways								33		
		NEW Cutaways								12		
2022		Replacement Smaller Vans									8	54
		Replacement Cutaways									32	
		NEW Cutaways									14	
2023		Replacement Smaller Vans										
		Replacement Cutaways										33
		NEW Cutaways										11
Total Vehicles				181	180	186	210	254	265	277	290	301

Source: DTS and OTS

Fleet Plan is based on a seven-year cycle, Therefore mileage is not taken into consideration.

Supplemental Provider Expansion

The use of supplemental providers has increased greatly in recent years, with most of the expansion through the use of taxis. Some limited use has also been made of a private van company, ProCare, to supplement TheHandi-Van routes with OTS creating daily passenger manifests specifically for that firm. The combination of supplemental providers now delivers approximately 700 rides per weekday.

The use of taxis as a paratransit alternative in Honolulu is complicated by the rapid growth of transportation network companies (TNCs) such as Uber and Lyft. Reports indicate that local taxi companies may have lost between 25% and 35% of their business to the new TNCs in recent years. While this situation is seen as very negative to the taxi industry in Honolulu, it has had the positive impact for TheHandi-Van of making greater capacity available for dedication to paratransit service. A proposed City ordinance could potentially reduce the presence of TNCs so dramatically as to restore taxi demand to former levels. Should that occur, it could have the impact of reducing supplemental provider capacity. The PGMS scenarios for use of Supplemental Providers is based upon the assumption that their use will continue at current levels through the next five years. If available capacity is reduced through elimination of TNCs or as a result of any other circumstance, then the lost capacity would have to be made up by the two remaining Core Components, TheHandi-Van and Agency Trips.

The lack of performance requirements in OTS' method of contracting for supplemental taxi service means that if a taxi vendor is busy, or simply cannot find a driver who will take an assigned trip, then the trip is "returned" to OTS. The contract scope of work does not specify any minimum expectation that trips actually be performed and, since there is no penalty to the taxi providers for failing to perform trips, there is no perceived downside to returning trips to OTS that the contractor cannot or will not do. This defeats the purpose of supplemental service, and especially of "overflow" service at peak times when this results in service failures and degraded service overall.

In order for this type of supplemental service to be successful and efficient, some fundamental contractual issues should be addressed:

- In recognition of a cumulative annual payout in the neighborhood of approximately $4 million to the supplemental providers, contracts should have penalties for non-performance of assigned trips by vendors if vendors do not conform to contract requirements.
    - There should be incentive payments for attaining and/or exceeding certain performance levels.
    - There should be some agreement, in writing, of the level and timing of service that the taxi system will actually accomplish. The supplemental services scope of work should quantify and identify exactly how many and in what manner/times of day the trips must be provided.[2]

[2] As an update to FY2016 Supplemental Service information, OTS has revised contracts with taxi vendors to include disincentives for giving back trips. OTS indicates that its staff in Maintenance, Finance and Human Resources spend considerable time with supplemental service vendors to ensure compliance with all applicable rules.

- There should be performance requirements for individual trips. Although the current scope of work identifies how no-shows and cancellations are to be recorded and reported, it does not properly set forth a requirement for timeliness of pick-ups or drop-offs in relation to the times scheduled by OTS and communicated to the passengers. The definition of on-time performance and how it will be communicated to taxi providers should also be included in the scope of work section on "service assignments".
- Driver training and performance standards should be more clearly defined. Current OTS requirements state only that the contractor shall have a "Training and Safety Policy and Program" to ensure drivers are properly trained, and that a copy of the policy and program be provided to OTS upon request. Other than meeting state laws and regulations, there is no definition of what types of training are required except the OTS-provided courses described in the next paragraph. The training policy and program should be reviewed and approved by the City before any service is provided.
- OTS also requires that drivers attend and pass OTS' sensitivity and securement courses within six months of contract award date. The requirement does not address training new drivers and could also result in existing drivers being in service for up to six months without proper training.

Accessible Vehicles

Due to the small market for wheelchair-accessible regular taxi service, and the availability of ADA paratransit through TheHandi-Van, Honolulu taxi companies do not have economic incentives to operate accessible vehicles on their own. They are not required to have any accessible vehicles by the City and County of Honolulu's permitting and regulation of taxicabs, which is codified in the Revised Ordinances of Honolulu (ROH), Chapter 12 – Common Carriers.

The reality is that accessible vehicles are expensive compared to sedans, typically double the cost or more. Requiring a substantial fleet percentage or number of accessible vehicles in a purchase of taxi service as supplemental ADA service will be difficult unless funding assistance is involved. As a result, there is a limitation on expansion of supplemental service because of the lack of accessible vehicles.

Agency Trips Expansion

Given the favorable cost performance of agency services, expansion of the agency trips program is proposed as a major source of capacity in current and future paratransit service deployment.

All four of the PGMS Scenarios include the assumption that a large portion of the growth in paratransit demand will be served by human service agencies. For human service agencies, this approach has many benefits as outlined below. But in addition to the City's current "Agency-Provided Trips" contracting models that apply different pricing approaches, the concept of "contractor provided trips" in which the City contracts directly with private providers to dedicate service to agencies has been considered. Many of the issues involved in these different approaches are discussed below.

Agency-Provided Trips: Agencies Serving Their Own Clients

The City has been working with human service agencies under two different contracting models since 2013. One cost model reimburses the agency for direct operating expenses. The other pays the agencies on the basis of an hourly fee for service. Both models involve the provision of service directly by the agencies for their own clientele.

Among the **benefits** to the City:

- Substantially lower-costs for service to ADA-eligible riders
- Reduction of ADA paratransit trips during the peak hours

Among the **benefits** to the participating agencies:

- Control over the timing of pick up and drop-off of agency clients at agency locations.
- Greatly improved on-time arrival and departure for agency clients.
- Availability of vehicles for use for mid-day trips for agency clients.
- Addition of work hours for existing employees to serve as drivers, in some cases resulting in full-time employment for former part time employees.
- Contribution of financial support for the participating agencies.

Contractor-Provided Trips: Agencies Served by Third Party Vendors

An alternative to the expansion of Agency-Provided Trips, which is directly operated by individual agencies for their own clients, is the purchase of transportation specifically dedicated to human service agency clients. The model for this type of arrangement is already in limited use. As described above, Supplemental Providers are used by OTS to provide demand response trips under the direction of OTS Similar services to provide dedicated service to ADA paratransit clients of human services agencies could be obtained through contracts managed by either OTS or DTS. Each organization has experience with supplemental contract management.

The use of for-profit transportation companies rather than human service agencies offers certain benefits. These include:

- Dedicated transportation management: Transportation companies, whether taxi firms or other professional transportation companies (e.g. tour operators or national bus contracting firms) have as their primary mission the provision of transportation services.
- Technical expertise: Transportation companies typically possess expertise in driver recruiting, training and assignment, maintenance management, vehicle acquisition, and other operating details that human service agencies normally do not.
- Resources: Transportation companies typically possess the resources necessary to sustain operational commitments including backup drivers and vehicles.
- Technical tools: Transportation companies often possess technical tools such as computer scheduling software, communication infrastructure, and dedicated facilities to support operations.

Agency Transportation Management Options

Overall management of the Agency Trips Program is an increasingly complex and time-intensive function. Currently, each participating agency has some form of contract with the City that results from either a federal project selection process or a formal procurement. Once the agreements are in place, oversight of the agencies becomes a responsibility of the City. Oversight includes ensuring contract compliance, adherence to federal and local regulations as appropriate, achievement of performance goals, and data gathering for required reporting. Contract management requirements include review, validation, and approval of monthly invoices and performance data, as well as resolving service delivery concerns between OTS and the agencies providing transportation for their TheHandi-Van clients.

DTS presently assigns two staff members to oversee the City's Human Service Transportation Coordination Program, which includes the Agency Trips Program, along with their other duties in the Paratransit Operations Branch. In the few years that the City has contracted with human service agencies to supplement TheHandi-Van service, it has become clear that management support for the overall program is essential to the operational success of the program and also its compliance with a myriad of federal and local requirements.

Many of the rules and regulations that attend the Agency Trips Program result from the use of federal grants to finance a portion of their operation. As a "subrecipient" of federal funds (the City and County of Honolulu is the "recipient"), federally-funded agencies must comply with complex regulations. The City has also required most of these elements of compliance from agencies that are funded through the City without federal funds, as these agencies' performance and cost data is reported to the FTA's National Transit Database (NTD). This combination means that virtually every agency participant in the program must meet these complex requirements. In order to encourage agencies to work with the City in this capacity, the City has used its resources to provide guidance and support.

The City also requires agencies to submit monthly performance data and annual financial and management data to monitor the agencies' compliance with FTA grant requirements. As these agencies are not accustomed to these requirements, City staff expend far more time assisting in developing and refining agencies' compliance procedures and reporting than they would with a dedicated transit company. Additional administrative resources will be required to expand the number of agency-operated transportation services beyond the planned addition of Lanakila Pacific and Responsive Caregivers of Hawaii in City FY2017.

With emphasis placed on the growth of Agency Trips Program as a key component of the Core Services, it is recommended that alternative approaches be considered for the ongoing management of the Agency Trips Program. Some of these are discussed below and are intended to encourage discussion about the future of Agency Trip Program management. DTS is set to continue in its current role as Mobility Manager, however planning should begin early in the five year study period of the PGMS to develop a comprehensive strategy.

Agency Trips Program Management Challenges

The expansion of the use of human service agencies as paratransit providers presents a number of challenges that apply both to the agencies themselves and also to the City. Agencies were established and are structured to provide various human service programs for targeted populations including frail seniors, individuals with developmental disabilities, and persons with serious physical disabilities. Transportation is typically added as an agency function to better support the agency's primary mission.

Similarly, the City has through the years provided both fixed-route and ADA paratransit service through an agreement with OTS, which has allowed it to rely on a transportation company to fulfill its mission of providing public transportation service including federally-required ADA paratransit. The growth of the Agency Trips Program as an offset to TheHandi-Van removes that portion of the service delivery mix from OTS and it has become an increasing responsibility of the City.

The City has contracted with Innovative Paradigms to deliver a number of elements of its Mobility Management Program including support of the agency trips program, delivery of travel training services, guidance to human service agencies, and refinements for paratransit services. The Mobility Management Program is an increasingly important component of the overall City paratransit service mix. There is a critical balance to be struck between maximizing use of agencies to deliver services and expecting so much of the agencies that they refuse to participate.

Agency Challenges

The merits of the Agency Trips Program for both the City and human services agencies have been well documented. The cost per trip is significantly lower than that for TheHandi-Van and productivity is very high. For the agencies, the ability to dedicate mostly existing program employees as drivers which allows for a very efficient use of personnel, and the control over service deployment specifically meets the agencies' needs. These are all dramatic benefits to the agencies which cannot be easily replicated by other approaches.

Yet in attaining these benefits, the agencies are faced with a number of challenges that vary somewhat depending upon the source of funding used to support their service. In the case of Goodwill, Lanakila and soon Responsive Caregivers, the service is paid for through federal grants matched by the City. While the agencies entered into the grant agreements with the expectation of providing greatly improved service for their clients, they also discovered that meeting the attendant federal regulations associated with the grants can be daunting. Among the most significant of these are:

- National Transit Database (NTD) reporting.
- Title VI compliance.
- Drug and Alcohol Testing compliance.
- Maintenance management compliance.
- Rigorous financial documentation

Agencies that are experienced with various federal grant programs often have systems in place that meet or contribute to meeting these requirements while other, typically smaller, agencies can find these requirements so significant as to question whether the grant funding is worth the effort.

To these many formal compliance requirements are added "routine" operating issues that any transportation provider must address. Among these are certain operating protocols in order to meet daily service expectations. These include:

- Driver training to ensure passenger and vehicle safety.
- Backup drivers to cover absences of regular drivers.
- Vehicle parking where agency property is limited.
- Maintenance quality where few vendors have the expertise to maintain increasingly complex vehicles.
- Fuel availability and convenience.
- Backup vehicles for routine maintenance requirements or other vehicle down time.

Meeting these requirements is a major challenge for agencies whose primary mission is not transportation. And yet, both the agencies that participate and the City desire to continue and expand the program because of the substantial offsetting benefits.

City Challenges

The City has managed the agency trips program since 2010. Through these years of management, a number of lessons have been learned. Among these are the following:

- NTD reporting of agency data is a very complex technical undertaking that requires a great deal of staff time.
- Oversight of compliance in order to meet federal or local requirements must be accomplished on a routine and frequent basis.
- Agencies often lack the experience with specific compliance issues and require the City to provide significant guidance and support.
- Agencies typically have very limited management staff dedicated to transportation who can address either immediate or longer-term problems.
- City expertise in paratransit operations is limited thus minimizing the potential for ongoing program refinement, operational improvements, and immediate problem solving.

The major challenge to the City then becomes, "how does it provide the necessary assistance and support to the Agency Trips Program while itself challenged by minimal resources and expertise in this somewhat unique program?" Possible approaches to this issue are discussed below.

City and County of Honolulu as Mobility Manager

The current structure has two DTS staff members assigned most of the tasks associated with mobility management. In turn, support and guidance for the function is provided to DTS through its contract with Innovative Paradigms. Agreements are in place to carry on this program for several additional years.

Plans are in place for the near-term for the City to continue to perform all such duties with in-house staff resources. Innovative Paradigms supports the City's agency partners through assistance with NTD reporting, compliance with drug and alcohol testing rules, Title VI compliance, maintenance management, etc. The arrangement with Innovative Paradigms provides expertise that is not presently available in-house.

As the Agency Trips Program grows in the future, the expanding number of contracts can challenge the capability of City staff to manage the program. The agreements with Lanakila Pacific and Responsive Caregivers will stretch the existing staff to maintain effective oversight of the program. Substantial additional expansion of the Agency Trips Program recommended in the PGMS will certainly require additional staff resources.

Even with this current structure and its long-term programming, there are options within DTS to adjust the position of mobility management relative to other functional transit modes. The PGMS has outlined the three Core elements of the transportation for ADA-eligible individuals (TheHandi-Van, the human service agencies, and supplemental providers.) . In the DTS structure, oversight of TheHandi-Van is accomplished at the Branch Chief level. The mobility management function

is at a lower level in the structure. One potential revision to the current structure could be to elevate this function to a level comparable to ADA paratransit functions within DTS, with a commensurate addition of staffing for the new branch.

Whether or not the internal structure of DTS is modified, DTS could add staff resources to carry on management of a number of agency agreements. In so doing, it would be advisable to select staff with both operations and federal compliance experience in order to provide technical support to the agencies and to continue to direct overall program refinement.

Centralized Agency Management

Some communities, including many in California, use a centralized agency to manage all aspects of human service transportation delivery. Though the actual services delivered vary from community to community based upon local needs, it is the centralized management and delivery that they have in common. Among the elements of such an approach can be the centralized distribution of funding to human service operating agencies. There are examples of this where the centralized agency receives funding to manage its oversight and technical services functions and also implements service delivery through contracts with human service agencies.

In Honolulu, this model would involve the selection of a centralized agency operator and the shift of agency contracts from the City to that agency. Thus a centralized operator would be established with the technical capability to manage agency provider selection, implement contracts with selected agencies, oversee performance, ensure local and federal compliance, and conduct planning and analysis to refine the program going forward. The central management of the program could be a function taken on by an existing organization with the structural and technical abilities to develop an expanding program or it could be provided by a new organization specifically chosen for that purpose. It would then engage agencies such as Goodwill, The Arc, and SECOH through direct contracts to provide service.

Organizations that manage projects like those described in this PGMS tend to be very minimal in size and breadth and thus focus strategically on human service coordination.

The selection of such an organization from among existing agencies could be accomplished through the use of an RFP. Such an approach has been used successfully in other communities The RFP would specify requirements for the proposing firm’s technical capabilities, vision for the program, contract management capability, performance monitoring, financial management, as well as for a staffing plan and other operational details.

Either the creation of new non-profit agency or the selection of an existing organization to manage the agency trips program would narrow the City’s financial management of the agency trips program to a single contract. Through its contract, the City would direct the central agency to achieve specific program goals including specified service delivery levels, required interaction with TheHandi-Van, vehicle standards, coordination of services between agencies, etc. The current program size would likely dictate an initial professional staff of approximately three

individuals with expertise in paratransit operations, contract management, federal procurement and management regulations, and financial management. Under the central management model, a single agency would oversee all aspects of compliance by partner agencies and report to the City accordingly.

Outside Agency Mobility Management

Communities across the country have turned to outside organizations to manage coordinated transportation projects. Some of the national transportation consulting firms that have provided support in the management of broad mobility programs include Nelson\Nygaard, AMMA Transit Planning, and Mobility Planners. Innovative Paradigms, under the auspices of its parent corporation Paratransit, Inc., also has provided various types of transportation management in Sacramento, CA, since 1978, including managing all human service agency coordination, operating a large centralized maintenance program, a travel training program and a volunteer driver program, and administering a variety of federal and state grants.

The separate nonprofit agency model has not received great consideration to date in Honolulu, due in part to there being no obvious existing agency that could take on transportation specialty functions as well as the acceptance of government agencies as the leaders in the provision of most community services.

In spite of the lack of history with nonprofit agency leadership in transportation, the formation of such an agency to fulfill this function remains an option. If this model were to be pursued in Honolulu, it would mean that the City and other agencies would take the lead in structuring the organization and ensuring its proper implementation.

Oversight Function

Oversight includes a combination of compliance monitoring and assistance with each local agency requiring differing levels of oversight. For example, Goodwill's sophistication and history of grant experience result in minimal oversight being required. The assistance provided to Goodwill has related to specific federal regulations related to federally-funded programs that even an experienced agency would not be expected to know. Any oversight organization would be expected to tailor its attention to the unique circumstances of each agency.

As the number of participants in the human service transportation community increases, the oversight function will become more complex and the management of the program will need to become more streamlined. New procedures and tools will need to be developed to meet both local and federal guidelines for project management. The intent of such an approach to human service transportation management would be to have a dedicated organization whose sole purpose is to efficiently operate a coordinated human service program. It would allow for employment of technical professionals experienced in the management of transportation and constantly introduce "best practices" through industry participation skill development.

Chapter 5 Core Service Finance Plans

The PGMS is intended to be a guide for the City in preparing its annual budget for each year covered by the Study. The PGMS delineates the anticipated growth in demand for service and translates that demand into specific service level increases. With the service increases reflected in increased operating expense, the City must also commit finances to the expansion of the fleet and other infrastructure indicated in the PGMS. This is demonstrated in periodic commitments of capital funds for both expansion and fleet replacement. Further, the PGMS recommends expansion of the Agency Trips Program. This will require continued and expanded investment in the service that is provided by human service agencies. This Chapter specifies the projected level of investment in each of those program elements to establish the overall finance plan for paratransit service. Certain assumptions that are critical to this investment plan are defined below.

TheHandi-Van/Supplemental Provider/Agency Split

The finance plan is based upon an assumed split of service into three major components. The first is TheHandi-Van itself. As discussed, TheHandi-Van service level has grown with a major expansion of service in FY2016. This has been accomplished through extended use of existing equipment by committing additional driver hours to the daily service level. More effective allocation of resources to correspond to demand patterns throughout the day can be accomplished by adding vehicles to TheHandi-Van fleet. The fleet plan suggests some fleet expansion each year.

The PGMS assumes that supplemental providers are at capacity for commitment to paratransit. While this assumption can be debated with the provider community, any expansion options should take into account the need for accessible vehicles and be structured accordingly.

The Agency Trips Program is proposed to expand under the PGMS. As the most cost-effective service delivery method, Agency Trips has substantial growth potential. The one serious limitation on such growth is the management structure necessary to support this option. The PGMS assumes that an appropriate structure will be created to accomplish continued growth.

Rate of Increase in Operating Costs of TheHandi-Van

The PGMS includes a projected cost increase rate (separate from expansion) of 3% per year starting in FY2017. This is a modest rate of increase. TheHandi-Van's current labor agreement includes wage increases for most workers of between 4.1% and 5.2% each year. This is obviously higher than the projected 3%. In order for the overall increase of 3% to be maintained, certain other costs would have to be held to increases less than 3% per year.

Both agency and supplemental provider cost increases are likely to be easier to hold to an approximate 3% level. Neither group is unionized and wages in the nonprofit sector tend to be modest in comparison to public employee wages in any case.

Vehicle Acquisition

Vehicle acquisition costs are projected for TheHandi-Van based upon the cost of cutaway-type vehicles. Expanded use of small vehicles was considered in the PGMS but no final conclusions were reached on the actual number of small vehicles that would be reasonable to project. Therefore, the decision was made to project costs based upon cutaway-type vehicles as the most conservative approach. Addition of small vehicles in the future could result in cost savings.

There are no separate vehicle cost estimates for agencies or supplemental providers. In the case of agencies, they have historically built the cost of vehicles into their operating rates. This is a key analytic factor in comparing their total costs to those stated for TheHandi-Van because TheHandi-Van's costs typically only include operations. The agencies have done an excellent job of arranging financing for their fleet needs. This is expected to continue into future contracts. The supplemental providers similarly build their vehicle costs into rates charged for contract operations. TheCab, for example, uses a variation of the meter rate to charge TheHandi-Van for supplemental service. Its rate includes any capital cost associated with this.

Facility Expansion

This PGMS does not project specific facility expansion costs. The 2009 *Public Transit Facility Master Plan* contained cost estimates prepared by architects and engineers, which are better than could be included in this Study without the additional time and expense of adding such expertise to the consulting team. However, the City should follow the PGMS with a refinement to the Facility Plan to address the projected increase in the total TheHandi-Van fleet by nearly 40 vehicles (under the Status Quo Scenario) during the five-year study horizon. An additional 40 vehicles would exceed the present storage and maintenance capacity of the Middle Street facility and space at the Pearl City facility is similarly limited. As facility needs are addressed, specific attention should be given to adding fueling capability for TheHandi-Van at a dedicated facility. With some redeployment of vehicles to other outlying locations around Oahu, space may be made available at Middle Street for on-site fueling for TheHandi-Van.

Agency Trips Program Management

The cost of centralized management of the Agency Trips Program should be considered in future budget planning. Whether done in-house by DTS or contracted to an outside agency manager, there will be cost to managing an increasingly complex agency program. Routine management of the entire agency program is estimated to require three dedicated, full-time staff professionals at its peak excluding operation of a potential central maintenance program. Provided through an outside organization, the estimated expense of this function is approximately $300,000 in the early years expanding to approximately $415,000 with full staffing. Should the City choose to expand this management capability in–house rather than through a contract operation, the expense of office space and operating costs could be reduced or eliminated. The necessary staff could be added to the existing employees in the Public Transit Division of DTS.

Paratransit Finance Plans

The figures on the following pages present the proposed finance plans for the fours scenarios for the five-year period of FY2018 through FY2022.

Future Paratransit Funding

The *Human Services Transportation Coordination Plan Update 2012* noted the importance of including paratransit services in any future transportation tax measure. Many Mainland communities have included these services specifically in tax initiatives. They have done so realizing that investment in paratransit is typically much less relative to the very large expenditures necessary to support highway and rail projects or major bus expansion. Further, many communities have also recognized that investment in the agency service element of the paratransit program achieves substantial results with comparatively little overall expense. The PGMS therefore recommends that any future transportation funding initiative for the island of Oahu include specific provisions to fund paratransit expansion and further give special recognition to the efficiencies of some of the creative programs described in this PGMS including Agency-Provided Trips.

Paratransit Growth Management Study Strategies

Extensive technical analysis and expert demand forecasting resulted in the consideration of four service delivery scenarios that are directed at attaining ADA compliance while also ensuring the sustainability of the paratransit service. In balancing the alternative approaches, the PGMS recommends that the Fare Increase and Improved On-Time Performance Scenario be adopted by the City and used as a guide to future paratransit decision-making.

Figure 5.1 Finance Plan – Fare Increase and Improved On-Time Performance Scenario

FARE INCREASE AND IMPROVED ON-TIME PERFORMANCE						
	Base Year 2016	**Projected 2018**	**Projected 2019**	**Projected 2020**	**Projected 2021**	**Projected 2022**
Effective On-Time Window	45	35	30	30	30	30
Fare	$ 2.00	$ 2.50	$ 3.00	$ 3.50	$ 4.00	$ 4.00
SERVICE VOLUME						
Total						
Projected trips	1,242,798	1,424,596	1,538,301	1,521,996	1,517,071	1,579,682
Projected Service Hours	651,152	704,387	769,133	752,292	741,894	773,777
TheHandi-Van						
Projected trips	890,453	923,980	1,022,173	989,580	967,553	1,012,206
Projected Service Hours	556,622	577,580	638,960	618,586	604,817	632,730
Supplemental Providers (Taxi)						
Projected trips	190,368	190,368	190,368	190,368	190,368	190,368
Projected Service Hours	59,507	59,507	59,507	59,507	59,507	59,507
Agency						
Projected trips	161,977	310,248	325,760	342,048	359,151	377,108
Projected Service Hours	35,023	67,301	70,666	74,199	77,570	81,540
ASSETS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
TheHandi-Van						
Total Cutaway buses	165	171	191	191	191	191
Total Small vehicles	15	16	16	16	16	16
Total Vehicles	180	187	207	207	207	207
OPERATIONS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
Total Cost	**$50,567,844**	**$56,862,406**	**$58,756,124**	**$63,898,738**	**$64,722,232**	**$69,454,798**
Operating cost	$46,284,364	$52,259,840	$58,756,124	$59,046,760	$59,724,694	$64,008,917
Capital cost [1]	$4,283,480	$4,602,566	$0	$4,851,978	$4,997,538	$5,445,881
TheHandi-Van						
Operating cost	$40,422,112	$44,460,717	$50,661,185	$50,517,171	$50,874,500	$54,819,082
Capital cost	$4,283,480	$4,602,566	$0	$4,851,978	$4,997,538	$5,445,881
Supplemental Providers (Taxi)						
Operating cost	$4,440,583	$4,707,018	$4,848,229	$4,993,675	$5,143,486	$5,297,790
Agency						
Operating cost	$1,421,669	$3,092,105	$3,246,710	$3,535,913	$3,706,709	$3,892,045

Base Year FY2016 FY2016 actual data used as base year for projections FY2018 – FY2022
[1]Capital cost include only TheHandi-Van vehicles

Figure 5.2 Finance Plan - Status Quo Scenario

STATUS QUO						
	Base Year 2016	**Projected 2018**	**Projected 2019**	**Projected 2020**	**Projected 2021**	**Projected 2022**
Effective On-Time Window	45	45	45	45	45	45
Fare	$ 2.00	$ 2.00	$ 2.00	$ 2.00	$ 2.00	$ 2.00
SERVICE VOLUME						
Total						
Projected trips	1,242,798	1,348,876	1,404,994	1,463,265	1,523,838	1,586,729
Projected Service Hours	651,152	657,055	685,802	715,579	746,124	778,181
TheHandi-Van						
Projected trips	890,453	848,260	888,866	930,849	974,319	1,019,253
Projected Service Hours	556,622	530,247	555,630	581,873	609,047	637,135
Supplemental Providers (Taxi)						
Projected trips	190,368	190,368	190,368	190,368	190,368	190,368
Projected Service Hours	59,507	59,507	59,507	59,507	59,507	59,507
Agency						
Projected trips	161,977	310,248	325,760	342,048	359,151	377,108
Projected Service Hours	35,023	67,301	70,666	74,199	77,570	81,540
ASSETS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
TheHandi-Van						
Total Cutaway buses	165	170	170	173	181	191
Total Small vehicles	15	16	16	16	16	16
Total Vehicles	180	186	186	189	197	207
OPERATIONS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
Total Cost	**$50,567,844**	**$50,858,565**	**$52,513,795**	**$61,902,192**	**$66,367,601**	**$70,102,077**
Operating cost	$46,284,364	$48,616,289	$52,149,130	$56,048,601	$60,080,487	$64,390,543
Capital cost [1]	$4,283,480	$2,242,276	$364,665	$5,853,591	$6,287,114	$5,711,534
TheHandi-Van						
Operating cost	$40,422,112	$40,817,167	$44,054,192	$47,519,012	$51,230,292	$55,200,708
Capital cost	$4,283,480	$2,242,276	$364,665	$5,853,591	$6,287,114	$5,711,534
Supplemental Providers (Taxi)						
Operating cost	$4,440,583	$4,707,018	$4,848,229	$4,993,675	$5,143,486	$5,297,790
Agency						
Operating cost	$1,421,669	$3,092,105	$3,246,710	$3,535,913	$3,706,709	$3,892,045

Base Year FY2016 FY2016 actual data used as base year for projections FY2018 – FY2022
[1]Capital cost include only TheHandi-Van vehicles

Figure 5.3 Finance Plan – Fare Increase Scenario

FARE INCREASE						
	Base Year 2016	**Projected 2018**	**Projected 2019**	**Projected 2020**	**Projected 2021**	**Projected 2022**
Effective On-Time Window	45	45	45	45	45	45
Fare	$ 2.00	$ 2.50	$ 3.00	$ 3.50	$ 4.00	$ 4.00
SERVICE VOLUME						
Total						
Projected trips	1,242,798	1,281,432	1,281,355	1,290,015	1,305,033	1,358,893
Projected Service Hours	651,152	614,896	608,515	607,281	609,349	635,761
TheHandi-Van						
Projected trips	890,453	780,816	765,226	757,598	755,514	791,416
Projected Service Hours	556,622	488,088	478,343	473,575	472,272	494,714
Supplemental Providers (Taxi)						
Projected trips	190,368	190,368	190,368	190,368	190,368	190,368
Projected Service Hours	59,507	59,507	59,507	59,507	59,507	59,507
Agency						
Projected trips	161,977	310,248	325,760	342,048	359,151	377,108
Projected Service Hours	35,023	67,301	70,666	74,199	77,570	81,540
ASSETS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
TheHandi-Van						
Total Cutaway buses	165	145	139	139	139	144
Total Small vehicles	15	16	16	16	16	16
Total Vehicles	180	161	155	155	155	160
OPERATIONS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
Total Cost	**$50,567,844**	**$46,905,179**	**$46,021,289**	**$52,056,306**	**$54,217,890**	**$57,497,254**
Operating cost	$46,284,364	$45,370,990	$46,021,289	$47,204,328	$48,575,564	$52,051,372
Capital cost [1]	$4,283,480	$1,534,189	$0	$4,851,978	$5,642,326	$5,445,881
TheHandi-Van						
Operating cost	$40,422,112	$37,571,867	$37,926,351	$38,674,739	$39,725,369	$42,861,537
Capital cost	$4,283,480	$1,534,189	$0	$4,851,978	$5,642,326	$5,445,881
Supplemental Providers (Taxi)						
Operating cost	$4,440,583	$4,707,018	$4,848,229	$4,993,675	$5,143,486	$5,297,790
Agency						
Operating cost	$1,421,669	$3,092,105	$3,246,710	$3,535,913	$3,706,709	$3,892,045

Base Year FY2016 FY2016 actual data used as base year for projections FY2018 – FY2022
[1]Capital cost include only TheHandi-Van vehicles

G n Figure 5.4 Finance Plan – Improved On-Time Performance Scenario

IMPROVED ON-TIME PERFORMANCE						
	Base Year 2016	**Projected 2018**	**Projected 2019**	**Projected 2020**	**Projected 2021**	**Projected 2022**
Effective On-Time Window	45	35	30	30	30	30
Fare	$ 2.00	$ 2.00	$ 2.00	$ 2.00	$ 2.00	$ 2.00
SERVICE VOLUME						
Total						
Projected trips	1,242,798	1,540,104	1,769,179	1,842,554	1,918,828	1,998,020
Projected Service Hours	651,152	776,591	913,454	952,673	993,032	1,035,279
TheHandi-Van						
Projected trips	890,453	1,039,488	1,253,050	1,310,138	1,369,309	1,430,544
Projected Service Hours	556,622	649,784	783,282	818,967	855,955	894,233
Supplemental Providers (Taxi)						
Projected trips	190,368	190,368	190,368	190,368	190,368	190,368
Projected Service Hours	59,507	59,507	59,507	59,507	59,507	59,507
Agency						
Projected trips	161,977	310,248	325,760	342,048	359,151	377,108
Projected Service Hours	35,023	67,301	70,666	74,199	77,570	81,540
ASSETS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
TheHandi-Van						
Total Cutaway buses	165	194	238	249	261	274
Total Small vehicles	15	16	16	16	16	16
Total Vehicles	180	210	254	265	277	290
OPERATIONS	**2016**	**2018**	**2019**	**2020**	**2021**	**2022**
Total Cost	**$50,567,844**	**$65,252,839**	**$71,536,055**	**$81,765,383**	**$87,523,289**	**$92,509,612**
Operating cost	$46,284,364	$57,817,925	$70,198,951	$75,410,985	$80,849,302	$86,665,251
Capital cost [1]	$4,283,480	$7,434,915	$1,337,104	$6,354,398	$6,673,987	$5,844,361
TheHandi-Van						
Operating cost	$40,422,112	$50,018,802	$62,104,012	$66,881,396	$71,999,107	$77,475,417
Capital cost	$4,283,480	$7,434,915	$1,337,104	$6,354,398	$6,673,987	$5,844,361
Supplemental Providers (Taxi)						
Operating cost	$4,440,583	$4,707,018	$4,848,229	$4,993,675	$5,143,486	$5,297,790
Agency						
Operating cost	$1,421,669	$3,092,105	$3,246,710	$3,535,913	$3,706,709	$3,892,045

Base Year FY2016 FY2016 actual data used as base year for projections FY2018 – FY2022
[1]Capital cost include only TheHandi-Van vehicles

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Chapter 6: Delivery of Additional Service Options

Introduction

Serving paratransit demand is a multi-faceted endeavor requiring a combination of demand mitigation strategies (discussed in Chapter 4: Demand Management Strategies), service increases (discussed in detail in Chapter 5: Core Service Delivery Elements), and additional program elements that are important but do not have the same statistical impact as other PGMS strategies. These Additional Service Options are a combination of rider education efforts, new service delivery trials, adjustments to information tools, and continuation of existing programs, all of which contribute to encouraging individuals to "catch the right bus." Many of these are low-cost and represent best practice concepts that are already underway in Honolulu or are being used by other transit agencies around the U.S.

Taxi Voucher Program

Individuals with disabilities have used taxi service since before the ADA mandated paratransit services. Today, agencies use taxis in many ways to supplement their service. The benefits of using taxis include their ability to provide trips on a real-time, same-day basis as needed, especially during peak hours or on a pre-scheduled basis.

Currently, OTS contracts with local taxi companies to provide approximately 700 trips per day to individuals who are eligible for TheHandi-Van. The vehicles and drivers provided by the vendors are not fully dedicated to paratransit trips, but typically provide rides throughout the day that do not fit on the schedules of TheHandi-Van vehicles.

While many transit agencies, like OTS, manage supplemental service by scheduling trips for riders, another method of taxi utilization involves subsidizing fares and allowing riders to schedule their own trips directly with taxi vendors. These programs, called taxi voucher, taxi scrip, or taxi subsidy, are very attractive to consumers who do not have to schedule their trips in advance. Eligibility for participation in taxi voucher programs is typically limited to:

- ADA paratransit eligible riders
- Anyone with a disability even if they are not ADA-eligible
- Individuals over a certain age
- Individuals of low income

Industry reports indicate that because riders prefer same-day trips in taxis compared to next-day trips in cutaway vans, the demand for taxi service can be very high to the point of unsustainability. Many transit agencies also report that managing taxi voucher programs can be very labor-intensive and can require the addition of personnel to deal with the influx of paper from customers and vendors, while moving from paper to "smart card" technology can be expensive and time-consuming.

Even with the large administrative resources required to manage taxi subsidy programs, the growth of such programs nationwide indicates the concept should be explored in greater detail in Honolulu. Further analysis of management strategies, eligibility criteria and funding levels could lead to a pilot program during the five-year period of the PGMS. An initial annual investment of $100,000 could result in as many as 10,000 ADA-eligible trips being diverted from the TheHandi-Van.

Conditional Eligibility

Under the ADA, paratransit functions as a safety net for people with disabilities who are unable to use the fixed-route transit system due to the effect of their disabilities. Similarly, a requirement of the ADA Title II regulations for nondiscrimination in state and local government services is: *"A public entity shall administer services, programs, and activities* ***in the most integrated setting*** *appropriate to the needs of individuals with disabilities."* This concept of an integrated setting appears numerous times in the ADA transportation regulations, emphasizing the goal of making the "mainstream" system (i.e. fixed-route) accessible to those with disabilities.

Paratransit is to be provided for those individuals where using the fixed-route service is not feasible, due to the person's disability, or environmental factors combined with the disability. For consumers who are granted unconditional ADA paratransit eligibility, use of fixed-route transit may not ever be an option. However, there is no penalty associated with use of TheBus by an unconditionally eligible rider.

National research indicates that between 35% - 45% of paratransit users are able to use fixed-route for some of their trips. Many of these individuals have been found to be conditionally eligible for ADA paratransit, meaning that it has been determined through the eligibility process that there will be times when the effects of their disability, in combination with architectural or environmental barriers, will prevent access to and from boarding locations, but that at other times the use of fixed-route is not prevented.

Conditional eligibility is a well-documented best practice for public transit agencies. The cost savings associated by trips that are taken on fixed-route instead of paratransit vehicles can be significant. However, whatever the level of trip-by-trip scheduling that is implemented, seats are made available on paratransit when riders choose other modes of transportation, and paratransit riders benefit when transportation options are available.

In Honolulu, conditional eligibility currently involves notifying ADA-eligible passengers of when fixed-route should be used and then self-selection by these passengers of the most appropriate mode of transportation for their trips. While the Core Elements of the PGMS remain the focus of growth management efforts, this approach, combined with new action to promote the benefits of using TheBus, should be considered in the future.

The DTS and OTS, working together, can develop other elements of conditional eligibility. It will then be the responsibility of OTS to implement such program.

Chapter 7: Scenario Summaries

	Base	Projections				
ALL MODES	**FY2016[1]**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
FARE INCREASE & IMPROVED ON-TIME PERFORMANCE						
Fare	$2.00	$2.50	$3.00	$3.50	$4.00	$4.00
Trips	1,242,798	1,424,596	1,538,301	1,521,996	1,517,071	1,579,682
Service Hours	651,152	704,387	769,133	752,292	741,894	773,777
Operating Cost	$46,284,364	$52,259,840	$58,756,124	$59,046,760	$59,724,694	$64,008,917
Fleet Size	180	187	207	207	207	207
Capital Cost (Vehicles)[2]	$4,283,480	$4,602,566	$0	$4,851,978	$4,997,538	$5,445,881
STATUS QUO						
Fare	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
Trips	1,242,798	1,348,876	1,404,994	1,463,265	1,523,838	1,586,729
Service Hours	651,152	657,055	685,802	715,579	746,124	778,181
Operating Cost	$46,284,364	$48,616,289	$52,149,130	$56,048,601	$60,080,487	$64,390,543
Fleet Size	180	186	186	189	197	207
Capital Cost (Vehicles)[2]	$4,283,480	$2,242,276	$364,665	$5,853,591	$6,287,114	$5,711,534
FARE INCREASE						
Fare	$2.00	$2.50	$3.00	$3.50	$4.00	$4.00
Trips	1,242,798	1,281,432	1,281,355	1,290,015	1,305,033	1,358,893
Service Hours	651,152	614,896	608,515	607,281	609,349	635,761
Operating Cost	$46,284,364	$45,370,990	$46,021,289	$47,204,328	$48,575,564	$52,051,372
Fleet Size	180	161	155	155	155	160
Capital Cost (Vehicles)[2]	$4,283,480	$1,534,189	$0	$4,851,978	$5,642,326	$5,445,881
IMPROVED ON-TIME PERFORMANCE						
Fare	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
Trips	1,242,798	1,540,104	1,769,179	1,842,554	1,918,828	1,998,020
Service Hours	651,152	776,591	913,454	952,673	993,032	1,035,279
Operating Cost	$46,284,364	$57,817,925	$70,198,951	$75,410,985	$80,849,302	$86,665,251
Fleet Size	180	210	254	265	277	290
Capital Cost (Vehicles)[2]	$4,283,480	$7,434,915	$1,337,104	$6,354,398	$6,673,987	$5,844,361

Source: Nelson\Nygaard and Innovative Paradigms
Base Year FY2016[1] FY2016 actual data used as base year for projections FY2018 – FY2022
Capital Cost[2] Amount required for vehicle procurement

FARE INCREASE & IMPROVED ON-TIME-PERFORMANCE SCENARIO

YEAR 1: FY2018

Current fare structure is revised beginning in Year 1, FY2018. Changes made to improve on-time-performance beginning Year 1, FY2018. No changes made supplemental services. Service levels Agency Trips increase substantially. New programs such as taxi vouchers are not implemented.

	FY 2018 Projections for all modes: TheHandi-Van, Supplemental Vendors, and Agency Service		**Trips: 1,424,596 15% increase**	**Service Hours: 704,387 8% increase**	**Cost: $52,259,80 13% Increase**
Category	***Recommendation***	***Cost***	***Effect***		
DEMAND MANAGEMENT/SERVICE VOLUME					
Fare	Basic fare increase - $0.50 No premium fares implemented	$2.50	15% increase in ridership		
On Time Performance	On Time Window changed to 35 minutes				
Service Level	**TheHandi-Van (DO[1]):** 4% growth in Service Hours	$44,460,717	Increase of $4,038,605 (10%)		
	Supplemental Vendors (PT[2]): 0% growth in Service Hours	$4,707,018	Increase of $266,435 (6%)		
	Agency Service: 92% growth in Service Hours	$3,092,105	Increase of $1,670,436 (117%)		
ASSETS					
	Vehicles Delivered FY2018		25 replacement cutaways and 7 new smaller vans		
	Handi-Van Fleet Size FY2018		187		
	Handi-Van Vehicle Procurement FY2019	$4,602,566	For delivery in FY2019: 19 replacement and 20 new cutaways		
	Facility		To be discussed		

[1]DO: Direct Operated
[2]PT: Purchased Transportation

FARE INCREASE & IMPROVED ON-TIME-PERFORMANCE SCENARIO

YEAR 2: FY2019

Current fare structure is revised in Year 2, FY2019. Changes made to improve on-time-performance beginning Year 1, FY2018. No changes made supplemental services. Service levels Agency Trips increase slightly. New programs such as taxi vouchers are not implemented.

	FY 2019 Projections for all modes: TheHandi-Van, Supplemental Vendors, and Agency Service		**Trips: 1,538,301 8% increase**	**Service Hours: 769,133 9% increase**	**Cost: $58,756,124 12% increase**
Category	***Recommendation***	***Cost***	***Effect***		
DEMAND MANAGEMENT/SERVICE VOLUME					
Fare	Basic fare increase - $0.50 No premium fares implemented	$3.00	8% increase in ridership		
On Time Performance	On Time Window changed to 30 minutes				
Service Level	**TheHandi-Van (DO[1]):** 11% growth in Service Hours	$50,661,185	Increase of $6,200,468 (14%)		
	Supplemental Vendors (PT[2]): 0% growth in Service Hours	$4,848,229	Increase of $141,211 (3%)		
	Agency Service: 5% growth in Service Hours	$3,246,710	Increase of $154,605 (5%)		
ASSETS					
	Vehicles Delivered FY2019		19 replacement and 20 new cutaways		
	Handi-Van Fleet Size FY2019		207		
	Handi-Van Vehicle Procurement FY2020	$0	0		
	Facility		To be discussed		

[1]DO: Direct Operated
[2]PT: Purchased Transportation

FARE INCREASE & IMPROVED ON-TIME-PERFORMANCE SCENARIO

YEAR 3: FY2020

Current fare structure is revised in Year 3, FY2020. Changes made to improve on-time-performance beginning Year 1, FY2018. No changes made supplemental services. Service levels Agency Trips increase slightly. New programs such as taxi vouchers are not implemented.

	FY 2020 Projections for all modes: TheHandi-Van, Supplemental Vendors, and Agency Service		**Trips: 1,521,996 1% decrease**	**Service Hours: 752,292 2% decrease**	**Cost: $59,046,760 0% increase**
Category	***Recommendation***	***Cost***	***Effect***		
DEMAND MANAGEMENT/SERVICE VOLUME					
Fare	Basic fare increase - $0.50 No premium fares implemented	$3.50	1% decrease in ridership		
On Time Performance	No change in On Time Window				
Service Level	**TheHandi-Van (DO[1]):** -3% growth in Service Hours	$50,517,171	Decrease of $144,014 (-.3%)		
	Supplemental Vendors (PT[2]): 0% growth in Service Hours	$4,993,675	Increase of $145,447 (3%)		
	Agency Service: 5% growth in Service Hours	$ 3,535,913	Increase of $289,204 (9%)		
ASSETS					
	Vehicles Delivered FY2020		0		
	Handi-Van Fleet Size FY2020		207		
	Handi-Van Vehicle Procurement FY2021	$4,851,978	For Delivery 2021: 8 replacement smaller vans and 33 replacement cutaways		
	Facility		To be discussed		

[1]DO: Direct Operated
[2]PT: Purchased Transportation

FARE INCREASE & IMPROVED ON-TIME-PERFORMANCE SCENARIO

YEAR 4: FY2021

Current fare structure is revised in Year 4, FY2021. No changes made to improve on-time-performance. No changes made supplemental services. Service levels Agency Trips increase slightly. New programs such as taxi vouchers are not implemented.

	FY 2021 Projections for all modes: TheHandi-Van, Supplemental Vendors, and Agency Service		**Trips: 1,517,071 0% increase**	**Service Hours: 741,894 1% decrease**	**Cost: $59,724,694 1% increase**
Category	***Recommendation***	***Cost***	***Effect***		
DEMAND MANAGEMENT/SERVICE VOLUME					
Fare	Basic fare increase - $0.50 No premium fares implemented	$4.00	0% increase in ridership		
On Time Performance	No change in On Time Window				
Service Level	**TheHandi-Van (DO[1]):** 2% decrease in Service Hours	$50,874,500	Increase of $357,328 (1%)		
	Supplemental Vendors (PT[2]): 0% growth in Service Hours	$5,143,486	Increase of $149,810 (3%)		
	Agency Service: 5% growth in Service Hours	$3,706,709	Increase of $170,796 (5%)		
ASSETS					
	Vehicles Delivered FY2021		8 replacement smaller vans and 33 replacement cutaways		
	Handi-Van Fleet Size FY2021		207		
	Handi-Van Vehicle Procurement FY2022	$4,997,538	For delivery 2022: 8 replacement smaller vans and 33 replacement cutaways		
	Facility		To be discussed		

[1]DO: Direct Operated
[2]PT: Purchased Transportation

FARE INCREASE & IMPROVED ON-TIME-PERFORMANCE SCENARIO

YEAR 5: FY2022

Current fare structure is unchanged in Year 5, FY2022. No changes made to improve on-time-performance. No changes made supplemental services. Service levels Agency Trips increase slightly. New programs such as taxi vouchers are not implemented.

	FY 2022 Projections for all modes: TheHandi-Van, Supplemental Vendors, and Agency Service		**Trips: 1,579,682 4% increase**	**Service Hours: 773,777 4% increase**	**Cost: $64,008,917 7% increase**
Category	***Recommendation***	***Cost***	***Effect***		
DEMAND MANAGEMENT/SERVICE VOLUME					
Fare	No basic fare increase. No premium fares implemented	$4.00	4% increase in ridership		
On Time Performance	No change in On Time Window				
Service Level	**TheHandi-Van (DO[1]):** 5% growth in Service Hours	$54,819,082	Increase of $3,944,582 (8%)		
	Supplemental Vendors (PT[2]): 0% growth in Service Hours	$5,297,790	Increase of $154,305 (3%)		
	Agency Service: 5% growth in Service Hours	$3,892,045	Increase of $185,335 (5%)		
ASSETS					
	Vehicles Delivered FY2022		8 replacement smaller vans and 33 replacement cutaways		
	Handi-Van Fleet Size FY2022		207		
	Handi-Van Vehicle Procurement FY2023	$5,445,881	For delivery 2023: 33 replacement and 8 new cutaways		
	Facility		To be discussed		

[1]DO: Direct Operated
[2]PT: Purchased Transportation

Appendix A: ADA Circular Section 8.5 Avoiding Capacity Constraints

Requirement

"The entity shall not limit the availability of complementary paratransit service to ADA paratransit eligible individuals by any of the following:

(1) Restrictions on the number of trips an individual will be provided;

(2) Waiting lists for access to the service; or

(3) Any operational pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons.

(i) Such patterns or practices include, but are not limited to, the following:

(A) Substantial numbers of significantly untimely pickups for initial or return trips;

(B) Substantial numbers of trip denials or missed trips;

(C) Substantial numbers of trips with excessive trip lengths.

(ii) Operational problems attributable to causes beyond the control of the entity (including, but not limited to, weather or traffic conditions affecting all vehicular traffic that were not anticipated at the time a trip was scheduled) shall not be a basis for determining that such a pattern or practice exists" (§ 37.131(f)).

Discussion

As one of the most important complementary paratransit service requirements, § 37.131(f) prohibits a transit agency from operating complementary paratransit service in a manner that significantly limits the availability of the service through a "pattern or practice" of actions, commonly referred to as capacity constraints. Operational problems outside the control of the agency do not count as part of a pattern or practice under this provision.

8.5.1 Prohibition against Limiting the Number of Trips

Policies that limit the number of trips, such as "no more than four trips per day," would violate § 37.131(f)(1). It is appropriate for a transit agency, however, to consider in-vehicle times and pickup windows of two closely spaced trips by the same riders so they do not overlap. For example, a rider might request two trips: a pickup from home to travel to a store at 10 a.m. and a pickup at that store to go to a bank at 11 a.m. If the pickup window is 0/+30 minutes and the estimated travel time from home to the store is 35 minutes, an on-time pickup at 10:30 a.m. would deliver the rider to their first destination at 11:05 a.m., after the start of the second pickup window. For this particular origin-destination pair, an agency could justify not accepting the two trip requests separated by only 60 minutes. An appropriate trip policy in this instance would require the two trip requests to be at least 90 minutes apart (to allow a small amount of time at the destination).

8.5.2 Prohibition against Waiting Lists

In the context of complementary paratransit operations, some reservation practices amount to waiting lists, which are prohibited by § 37.131(f)(2). Placing callers' names on a list when the schedules are full and informing them they will be contacted if space becomes available would constitute a prohibited waiting list. Similarly, telling callers the schedules are full and suggesting they call back at a later time to see if space becomes available would be a waiting list.

Accepting a trip request during a reservation call and scheduling the trip later internally is not the same as placing a trip request on a prohibited waiting list. It may not always be possible for an agency to identify a

scheduling solution during the course of a reservations call. In these instances, as long as the call-taker accepts the trip request and confirms the requested time with the rider, this is not a waiting list. Transit agencies that use this approach refer to these trips as "confirmed but unscheduled."

8.5.3 Untimely Service – Prohibited Operational Practices

As stated in § 37.131(f)(3)(i)(A), "substantial numbers of significantly untimely pickups for initial or return trips" are considered a capacity constraint and not permitted. The regulations do not provide an explicit threshold for what constitutes a "substantial number" or define "significantly untimely."

Timely pickups and arrivals are fundamental elements of any transportation service. Poor on-time performance for complementary paratransit, whether for pickups or drop-offs (if scheduling to appointment times), may discourage riders from using such services and may discourage other individuals with disabilities from applying to become eligible riders.

Pickup Windows and Timely Service

As discussed in Circular Section 8.4.5, many transit agencies use pickup windows to enable shared-ride scheduling and manage the daily variability of complementary paratransit service. FTA considers pickups on time as long as drivers arrive at pickup locations within these established windows. For example, for a pickup window of 9–9:30 a.m., pickups at 9:01, 9:10, or 9:30 a.m. are all considered on time.

Many agencies have established a policy requiring drivers to wait at least 5 minutes for riders to board the vehicle after arriving at the pickup address. In such cases, it is important that such policies also require drivers to wait until the *start* of the pickup window to begin a 5-minute countdown and to wait until the full 5 minutes have elapsed before departing without the rider. For example, when the pickup window begins at 11 a.m. and the vehicle arrives at 10:55 a.m., the driver would wait for the rider at least until 11:05 a.m. before departing.

On-Time, Early, and Late Pickups

When assessing the timeliness of service, it is important to distinguish among on-time, early, and late pickups, as follows:

- On time – FTA considers pickups as on time when a driver arrives at the pickup location within the established pickup window.
- Early – FTA considers pickups early if a driver arrives and departs with the rider before the established pickup window begins.
- Late – FTA considers pickups late if a driver arrives after the end of the established pickup window and the rider boards the vehicle.
-

Assessing On-Time Performance

To maintain good service quality, most transit agencies establish a standard for on-time pickups, such as "X percent of pickups will be on-time (i.e., within the 30-minute window) or early." In addition, some agencies have a standard related to very early pickups, such as "no more than Y percent of pickups will be more than Z minutes before the start of the on-time window."

In order to ensure that a pattern or practice of substantial numbers of untimely pickups is not occurring, FTA expects transit agencies to document and analyze on-time performance. Analyzing on-time performance enables agencies to make appropriate operational changes when performance falls below an established standard. Ensuring that the number of significantly untimely pickups is not substantial

means accurately recording arrival times in relation to scheduled pickup times and compiling this information for analysis. (Missed trips need their own separate analysis, which is discussed in Circular Section 0.)

When calculating on-time performance, transit agencies often combine early pickups together with on-time pickups when documenting on-time performance. While such an approach is appropriate for analysis purposes, it is not appropriate to pressure or require riders to board and depart earlier than the established pickup window. To avoid this, some agency policies direct drivers to wait "around the corner" and to not attempt a pickup until the start of the window. For analysis purposes, transit agencies typically report this combined metric as "early arrivals plus on-time arrivals" and separately track the number and rate of early pickups, late pickups, and on-time pickups. FTA recommends that agencies review their scheduling practices and overall capacity whenever the analysis shows a high number and rate of early pickups (e.g., the vehicle consistently arrives before the start of a rider's pickup window).

In addition, for the on-time performance analysis, FTA considers instances when drivers arrive on time and follow transit agency policies (e.g., wait the full 5 minutes), and riders are still no-shows, as on-time arrivals.

Operational problems attributable to causes beyond a transit agency's control, such as weather or traffic conditions that could not be anticipated at the time the trip was scheduled, are not a basis for determining that capacity constraints exist. However, scheduling practices that fail to take into account regularly occurring traffic conditions (i.e., known peak-period traffic delays) could result in prohibited capacity constraints.

8.5.4 Trip Denials and Missed Trips – Prohibited Operational Practices

A transit agency cannot have substantial numbers of trip denials and missed trips, as they are also considered capacity constraints and are not permitted under § 37.131(f)(3)(i)(B).

Trip Denials

Trip denials result when agencies do not accept trip requests. Avoiding denials means properly planning service, allocating resources, and managing operations in order to meet 100 percent of expected demand.

Examples of trip denials include:

- A rider requests a next-day trip and the transit agency says it cannot provide that trip.
- A rider requests a next-day trip and the transit agency can only offer a trip that is outside of the 1-hour negotiating window. This represents a denial regardless of whether the rider accepts such an offer.
- A rider requests a round-trip and the agency can only provide one leg of the trip. If the rider does not take the offered one-way trip, both portions of the trip are denials.

Counting the number of denials means accounting for all trips that the rider is unable to take because of a denial. For example, say a transit agency denies a rider the outbound portion of a requested round-trip and only offers a return trip. If the rider then elects not to travel at all, this represents two denials. However, if an agency denies a "going" trip and the rider accepts a return trip, then this is counted as one denial. The preamble to DOT's September 2011 amendment to its ADA regulations offered the following statement with respect to counting trip denials and missed trips:

> The Department believes that when a denied or missed trip makes a subsequent requested trip impossible, two opportunities to travel have been lost from the point of view of the passenger. In the context of a statute and regulation intended to protect the opportunities of passengers with disabilities to use transportation systems in a nondiscriminatory way, that is the point of view that most matters. To count denials otherwise would understate the performance deficit of the operator. The complementary paratransit operator obviously would not need to count as a denial a trip that was actually made (e.g., trip from Point A to Point B missed, passenger gets to Point B in a taxi, and complementary paratransit operator carries him from Point B back to Point A).

In order to ensure that a pattern or practice of substantial numbers of trip denials is not occurring, FTA expects transit agencies to document and analyze trip denials. FTA recommends including such details as the rider's identification, date of request, date and time of requested trip(s), origin and destination, and reason for denial. Reviewing the characteristics of these denials can help an agency determine their underlying causes in order to take steps necessary to prevent future denials.

Missed Trips

Missed trips, which are caused by agencies and not by riders, result from trips that are requested, confirmed, and scheduled, but do not take place because:

- The vehicle arrives and leaves before the beginning of the pickup window without picking up the rider and without any indication from the rider that he or she no longer wants to make the trip. Note that a rider is not obligated to board until the beginning of the pickup window or—for transit agencies that have a 5-minute wait-time policy—from the start of the pickup window until 5 minutes have elapsed.
- The vehicle does not wait the required time within the pickup window, there is no contact with the rider, and the vehicle departs without the rider. Note that if during the wait time the rider indicates he or she no longer wants to take the trip, this is typically recorded as a "cancel at the door."
- The vehicle arrives after the end of the pickup window and departs without picking up the rider (either because the rider is not there or declines to take the trip because it is now late).
- The vehicle does not arrive at the pickup location.

Based on reviews conducted by the FTA Office of Civil Rights, transit agencies experiencing high rates of missed trips due to late arrivals often need to add capacity.

As discussed above, riders are not obligated to board the vehicle before the start of pickup windows. In addition, in cases when vehicles arrive after the end of pickup windows, riders can choose to board vehicles, but if they refuse trips because they are late, FTA considers these as missed trips and not no-shows or "late cancellations" on the part of riders.

When riders do not board as scheduled, communication between drivers and dispatchers can often resolve issues. Dispatchers can verify the pickup location (through a combination of an automated vehicle location system and driver information), the vehicle arrival time, and the negotiated pickup time and associated on-time window. After confirming the information, dispatchers can then be confident in directing drivers and in documenting such events in their records. To help minimize the likelihood of both missed trips and passenger no-shows, dispatchers (and supervisors) can instruct drivers who arrive early

to wait the full wait time (established by each transit agency) within the on-time window. Finally, it is important to ensure that dispatchers differentiate and record no-shows and missed trips appropriately.

Given the prohibition against a pattern or practice of a substantial number of missed trips, FTA expects transit agencies to document and analyze missed trips. Such analyses can identify potential geocoding errors or problems in the underlying maps used for scheduling trips. Analysis of actual vehicle arrival and departure times, as well as dispatcher notes, will also help to ensure that the documentation of events is accurate.

When missed trips arise from improper actions by drivers and dispatchers (e.g., dispatchers of a transit agency with a 5-minute wait time policy advise, "Wait 3 minutes, then you can leave," or drivers leave early without first contacting dispatchers), the appropriate remedy is typically proper training or re-training, any applicable disciplinary action, and subsequent performance monitoring.

8.5.5 Excessive Trip Lengths – Prohibited Operational Practices

The length of complementary paratransit trips (also called travel time, trip duration, on-board time, or in-vehicle time) is another important measure of service. A pattern or practice of substantial numbers of trips with excessive trip lengths is a form of capacity constraint per § 37.131(f)(3)(i)(C); excessively long trips may discourage riders from using complementary paratransit services.

It is important to understand that "excessive" is in comparison to the time required to make a similar trip using the fixed-route system; while a 1-hour travel time for a 5-mile complementary paratransit trip may seem excessive in the abstract, if the same trip takes an hour using the fixed-route system, it is comparable, not excessive. Complementary paratransit service is by nature a shared-ride service. The standard of service is not intended to reflect that of a taxi service, which typically transports passengers directly to their destination.

Trip-Length Standards

To help minimize the number of excessively long trips, transit agencies typically establish a trip-length performance standard, defined in relation to the length of comparable fixed-route trips (as presented below). As with other policies, public input is valuable to inform such a standard.

FTA notes that transit agencies may consider all elements of fixed-route trips between origins and destinations when determining comparability in paratransit travel time, including:

- Walking time to the stop/station from the origin address
- Waiting time
- In-vehicle time (for all trip segments)
- Transfer times (if any)
- Walking time from the final stop/station to the destination address

Some agencies have adopted policies based on absolute maximum trip lengths. Such standards do not properly reflect comparability to the length of time a specific trip would take on fixed-route. For example, having a standard that no complementary paratransit trip can exceed 90 minutes is not appropriate for comparing short trips taken on the fixed-route system.

Some agencies also allow complementary paratransit ride times to be up to a multiple of the fixed-route ride time (e.g., twice as long). Such standards are not reasonable or appropriate for longer trips. Allowing

rides on complementary paratransit to be up to 2 hours for trips that took 1 hour by fixed-route would be outside the bounds of comparability. FTA encourages standards that are variable and consider trip distances and associated travel times on fixed-route. Many transit agencies using scheduling software set system parameters to address trips of varying length (rather than just set single, global settings).
To account for in-vehicle time and transfer times that may vary by day of week and time of day, FTA encourages transit agencies to use performance standards that account for such variations. Many agencies now have online trip planners that estimate the varying travel times for specific trips. However, the calculation of trip lengths for comparable fixed-route trips can be time consuming, even when aided by an online trip planner. FTA suggests analyzing a sample of complementary paratransit trip lengths periodically (weekly or monthly), focusing on trips longer than a certain duration (e.g., more than 45 or 60 minutes).

As with on-time performance, operational problems that are attributable to causes beyond the control of the transit agency are not a basis for determining that a pattern or practice of excessive trip length exists. However, effective complementary paratransit operations account for recurring factors such as known peak-period traffic conditions. FTA encourages transit agencies to establish travel time performance standards, such as “at least X percent of complementary paratransit trips shall have travel times equal to or less than comparable fixed-route travel times,” and expects agencies to closely monitor trip length performance. By monitoring and analyzing trip lengths, agencies can be aware of service issues and, if necessary, make operational adjustments to improve performance.

8.5.6 Other Potential Limits to Paratransit Service Availability

While § 37.131(f)(3)(i) lists three examples of patterns or practices that significantly limit the availability of service, the regulations specifically prohibit “any operational pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons” (§ 37.131(f)(3)). Other capacity constraints, including untimely drop-offs, poor telephone performance, and general practices that can discourage use of complementary paratransit, are discussed in this section.

Untimely Drop-Offs

All travelers using a transportation provider to travel to a time-sensitive appointment want to have confidence in the provider’s reliability. This is also true for complementary paratransit. Frequently arriving late to appointments could discourage use of the service. As such, FTA considers a pattern or practice of untimely drop-offs for trips with stated appointment times as a capacity constraint. As in pickup performance, monitoring on-time performance for trips with requested drop-offs is necessary. If the analysis indicates a pattern of late drop-offs, agencies can then make appropriate operational changes.

FTA encourages establishing policies to drop-off riders no more than 30 minutes before appointment times and no later than appointment times. Some transit agencies schedule drop-offs no later than 5 minutes before appointment times to allow riders time to get from vehicles to appointments.

Poor Telephone Performance

Despite the increasing use of other technologies, the telephone remains the primary means for complementary paratransit riders to request trips and to check on the status of a ride. Poor telephone performance can limit the availability of complementary paratransit service to ADA paratransit eligible riders and has the potential to constitute a capacity constraint under § 37.131(f)(3)(i).

Properly functioning telephone systems for complementary paratransit have sufficient capacity to handle calls from riders, along with the appropriate staffing to answer calls in a timely manner; they do not have

busy signals or excessively long hold times. For trip reservations, interactive voice response systems or online transactions offer alternatives to personal communications, but telephone calls with transit agency employees often remain the best communication method for many riders. Telephone conversations are especially helpful when riders have a complicated request or are checking on the status of a trip.

Promptly responding to trip-status calls for late pickups, commonly known as “where’s my ride?” calls, is especially important. Riders may not be in a suitable position to remain on hold while waiting for a response from transit agency representatives.

Besides making reservations and checking on trip status, complementary paratransit riders may call transit agencies to:

- Cancel or revise previous reservations
- Confirm times for future trips
- Obtain information on eligibility and other service issues

While these calls may be less time sensitive than trip-status calls, good customer service also includes having the capacity to answer and respond to such requests in a timely manner.
Long secondary hold times can also be a constraint. Calls may be answered, but then put back on hold or transferred to another line where a long hold occurs. Tracking such secondary holds can be difficult and is typically done through first-hand observations of the service.

Setting Telephone Hold-Time Standards

To evaluate their telephone performance, many transit agencies have established performance standards for telephone hold times. An optional good practice is to define a minimum percentage (e.g., X percent) of calls with hold times shorter than a specific threshold (e.g., 2 minutes) and a second (higher) percentage (e.g., Y percent) of calls with hold times shorter than a longer threshold (e.g., 5 minutes).

FTA discourages the use of performance standards based on *average* hold times over a defined period because doing so can mask poor performance at certain times. If using average hold times, however, it is important to narrow the period within which the averages are calculated. Measuring averages over an entire day, week, or month can obscure any issues. FTA recommends measuring averages over hourly periods. The standard using average hold times would then be set as a minimum percentage (e.g., X percent) of hours for which the average hold times are shorter than one threshold (e.g., 1 minute), and a second (higher) percentage (e.g., Y percent) of hours for which the average hold times are shorter than a second (higher) threshold (e.g., 3 minutes).

When transit agencies direct calls to different lines depending on the purpose of the call (e.g., reservation lines and dispatch lines), applying these standards to all public lines provides transit agencies with a complete view of their phone service. Another optional good practice is for agencies to track performance for each telephone line separately.

Automatic Call Distribution Systems

Larger transit agencies use an automatic call distribution (ACD) system to measure the number and length of calls placed on hold. Besides assigning incoming calls to reservationists, such systems can measure hold times and the length of calls by time of day. These measurements enable agencies to analyze call patterns to determine the percentage of calls that exceeded the standard and identify when these calls took place. Based on this analysis, agencies can make suitable adjustments to reduce hold times.

Smaller transit agencies—or the contractors who accept calls on their behalf—may not have ACD technology. Instead, they may have telephone systems that forward incoming calls to available open lines. When using this approach, FTA encourages agencies to use other methods to determine if calls are placed on hold. A simple way to test telephone capacity is to place calls from outside locations during the busiest times to see if there are busy signals or if the calls are placed on hold. Agencies can also make first-hand observations in the reservation office and manually record hold times.

If hold times are excessive at particular periods during the week, FTA recommends first determining if sufficient telephone capacity and workstations exist to handle peak volumes. If the technology is sufficient, transit agencies might then add reservationists or reassign reservationists' hours to better match peak demand.

Taking Calls in Languages Other Than English

Transit agencies that receive federal funds also have obligations under Title VI of the Civil Rights Act of 1964 for ensuring individuals with limited English proficiency (LEP) can access their programs and activities. These obligations are described in FTA's Title VI Circular 4702.1B, Chapter III-6. Because of these requirements, and in response to customer needs, some agencies employ reservationists who have been assessed for competency in English and a non-English language. An insufficient number of reservationists available to respond to calls in the caller's language can lead to longer-than-average hold times for these LEP callers and therefore may constitute a capacity constraint affecting this group. An agency may also decide to subscribe to a remote interpreter service that provides real-time interpretation in multiple languages.

Limiting the Number of Trip Requests per Call

Some transit agencies have adopted the policy of limiting the number of trip reservations per call to reduce the amount of time reservationists spend with each caller. However, if riders want to make more trip reservations than a policy allows for a single call, they will simply make multiple calls. This places an unnecessary burden on riders and leads to higher call volumes. Often, multiple trip requests occur because riders are scheduling repeat trips for the next several days and subscription service is not available or is limited. If this is the case, FTA encourages agencies to consider making subscription service available, or expanding the amount of subscription service provided.

Discouraging Use of the Service

Other practices that discourage individuals from applying for or using complementary paratransit may also constitute capacity constraints. Here are some examples of actions that potentially limit service:

- A transit agency omits the availability of complementary paratransit service from its public information.
- A transit agency operates demand responsive service for senior citizens in addition to its complementary paratransit service. For individuals who are 65 years or older, the agency only provides an application for its senior service when these individuals inquire about travel options.
- An individual lives in a private senior housing community that provides a van service on weekdays between 8 a.m. and 5 p.m. When that individual calls a transit agency to learn about how to get transportation on weekends, the agency suggests that they reschedule the trip for a weekday when the van service is operating.
-

At the same time, FTA encourages transit agencies to coordinate their complementary paratransit services with their other services available for individuals with disabilities, as well as transportation services provided and/or funded by other public agencies and private organizations. Similarly, FTA encourages agencies to inform current and potential complementary paratransit riders of the range of transportation options available in their service area. FTA especially encourages agencies to establish travel training programs that promote the use of fixed-route services for individuals who have the ability to use the fixed-route for a portion of their trips. Making sure people are aware of their transportation options so that they can make informed decisions is very different from discouraging complementary paratransit use.

8.5.7 Identifying and Addressing Patterns and Practices in Capacity Constraints

For any of the capacity constraints discussed earlier in this chapter, either due to policies or resulting from operational practices, FTA encourages transit agencies when monitoring their service delivery to consider performance, not only in terms of system wide percentages and frequency, but to also in terms of potential patterns. Agencies can search for instances of patterns of poor service in the following areas:

- Certain portion(s) of the service area
- Certain destinations
- Certain day(s) of week or time(s) of day
- Ambulatory versus non-ambulatory riders (particularly when using a mix of accessible and inaccessible vehicles)
- Certain individuals

Below are several examples of patterns of poor service quality that are not necessarily apparent at the system level.

- A transit agency's on-time pickup performance might be very high on a system wide basis. However, a more detailed analysis of performance may indicate that on-time performance on weekday mornings is significantly lower, or that trips for riders who need accessible vehicles have much lower rates of on-time performance. A reallocation of existing resources might remedy this problem, but in some cases this situation might require additional resources.
- A transit agency's overall telephone hold time might be very good. However, particular hours during the week may have significantly longer average hold times. This may result from higher call volume and/or lower staffing levels during these hours.
-

An agency can review these and other components of its complementary paratransit service for subsets of riders to identify potential patterns of poor service quality that could deny or limit service for them, and potentially discourage use of the service.

8.5.8 Circumstances Beyond a Transit Agency's Control

As stated in § 37.131(f)(3)(ii), certain causes of poor complementary paratransit service are beyond a transit agency's control and, therefore, are not causes for determining whether a pattern or practice exists. These situations include, for example, severe inclement weather, unpredictable traffic delays, and

occasional vehicle breakdowns. Although it is not possible to plan for all conditions that disrupt service, FTA encourages agencies to plan for disruptions or delays as follows:

- Rain or snow may cause vehicles to fall behind schedule. However, if there is snow on the roads from a previous storm, transit agencies can adjust schedules to account for slower vehicle speeds.
- Some traffic conditions cannot be anticipated. However, transit agencies can base their run schedules on the assumption that vehicles travel at lower speeds during peak periods—just as fixed-route schedules assume longer travel times during the morning and afternoon peaks—or can determine where and when heavy traffic is predictable and incorporate such delays into scheduling.
- While vehicle breakdowns cannot be anticipated, many transit agencies have readily available backup capacity that allows for rapid response when breakdowns occur, such as “floater” vehicles, backup drivers, or supervisors who can respond with spare vehicles. Agencies can also contract with other providers for backup service on an as-needed basis.
-

An excessive number of breakdowns may be due to poor maintenance practices or running vehicles past their useful lives. Such instances are within transit agencies’ control and are not justifications for poor performance.

Appendix B: ADA Circular Section 8.4.6 Fares

Requirement

"The fare for a trip charged to an ADA paratransit eligible user of the complementary paratransit service shall not exceed twice the fare that would be charged to an individual paying full fare (i.e., without regard to discounts) for a trip of similar length, at a similar time of day, on the entity's fixed-route system.

(1) In calculating the full fare that would be paid by an individual using the fixed-route system, the entity may include transfer and premium charges applicable to a trip of similar length, at a similar time of day, on the fixed-route system.

(2) The fares for individuals accompanying ADA paratransit eligible individuals, who are provided service under § 37.123(f) of [Part 37], shall be the same as for the ADA paratransit eligible individuals they are accompanying.

(3) A personal care attendant shall not be charged for complementary paratransit service.

(4) The entity may charge a fare higher than otherwise permitted by this paragraph to a social service agency or other organization for agency trips (i.e., trips guaranteed to the organization)" (§ 37.131(c)).

Discussion

Under § 37.131(c), the fare for a trip charged to an ADA paratransit eligible rider cannot exceed twice the fare that would be charged to an individual paying full fare (i.e., without regard for discounts) for a similar trip on the agency's fixed-route system. The question then becomes what is a "similar trip" on fixed-route. Appendix D to § 37.131 explains:

> To calculate the proper paratransit fare, the entity would determine the route(s) that an individual would take to get from his or her origin to his or her destination on the fixed-route system. At the time of day the person was traveling, what is the fare for that trip on those routes? Applicable charges like transfer fees or premium service charges may be added to the amount, but discounts (e.g., the half-fare discount for off-peak fixed-route travel by elderly and handicapped persons) would not be subtracted. The transit provider could charge up to twice the resulting amount for the paratransit trip.
>
> The system operates the same regardless of whether the paratransit trip is being provided in place of a bus or a rail trip the user cannot make on the fixed-route system.

FTA has found that monthly passes (e.g., those providing unlimited rides) on fixed-route are considered "discounts," which are not used to calculate the maximum complementary paratransit fare.

Transit agencies may determine locally whether to apply a flat fare or a varied fare for paratransit. For agencies with fare structures that vary by time of day or by distance, the § 37.131(c) maximum complementary paratransit fare provisions permit agencies to charge up to twice the fixed-route fare. For simplicity and ease of administering fare policies, some agencies charge a flat fare for all complementary paratransit trips regardless of the time of day or distance travelled. In such instances, however, the flat fare cannot exceed twice the lowest non-discounted fixed-route fare; otherwise, the complementary paratransit fare for the shortest trips and/or those during off-peak times would not meet the § 37.131(c) provisions. For example, if an agency's fixed-route fare ranges from $1.50 to $3.50 (with some trips

costing $2.50), charging up to $3, $5, and $7, respectively, for comparable paratransit trips is appropriate. However, if the agency charges a flat complementary paratransit fare, then the fare cannot exceed $3.

Determining Fares Where Multiple Fixed-route Paths Exist

Appendix D to § 37.131 discusses instances where fixed-route riders can make trips between two points using different routes:

> Where bus and rail systems are run by the same provider (or where the same bus provider runs parallel local and express buses along the same route), the comparison would be made to the mode on which a typical fixed-route user would make the particular trip, based on schedule, length, convenience, avoidance of transfers, etc.

This situation is most common for transit agencies that operate both rail and bus service or operate routes with limited stops (not commuter bus) and local bus service, when there may be origin-destination pairs served by a combination of bus-only, bus-rail, and rail-only itineraries. For example, in a hypothetical large metropolitan system, fixed-route riders might have alternative routing options via bus or via rapid rail that connect two points. During peak periods, the bus option is less costly (approximately $2) and requires a transfer. Because the bus is operating in traffic and the trip requires a transfer, it takes 50 minutes to complete. The rail trip, which requires no transfer, costs approximately $4.50, but takes half the time. In setting the fare for the complementary paratransit trip, this means considering which trip typical riders would make. In such instances, FTA recommends documenting in detail the methodology used for determining the fare for these types of trips.

Services provided by commuter bus or rail systems, which are not subject to complementary paratransit requirements, and services provided by other entities are not part of the basis for calculating comparable complementary paratransit fares.

Free-Fare Zones

Some transit agencies offer free trips on their fixed-route system within a specific geographic area or on a specific route or set of routes. In cases where complementary paratransit riders are traveling between origins and destinations that are both within 3/4 mile of a zero-fare route, and the typical fixed-route user would make use of this zero-fare route to make a comparable trip, applying the § 37.131(c) maximum fare provisions means the complementary paratransit fare for this trip is also zero. FTA recommends that agencies with free-fare zones that wish to determine whether a typical fixed-route user would in fact take advantage of the free-fare option compare the following elements in their analysis:

- Regular fixed-route fare (outside of free-fare zone)
- Frequency of the free service versus alternative service
- Need for transfers on the free versus alternative service
- Walking distances to and from the free service versus the alternative

Such an analysis would demonstrate that fixed-route riders might walk to the nearest boarding point in the free-fare zone instead of boarding the nearest fixed-route vehicle and transferring to the free-fare service. It might also demonstrate that individuals crossing the free-fare zone will typically use the regular fixed-route system, while individuals traveling between points along the free-fare zone are more likely to use the free-fare service. This analysis would enable a transit agency to determine whether it may charge a fare for a given complementary paratransit trip from origins to destinations that are both within 3/4 mile of the free-fare zone.

In some cities, other entities such as downtown business districts or convention authorities assume the responsibility for paying the fixed-route fare on a specific route or within a designated zone. Since from the perspective of the passenger, the fare is free, complementary paratransit fares within the designated zone would also be free, subject to the analysis outlined above. Therefore, FTA encourages transit agencies to consider including a requirement that the other entity also pay for complementary paratransit in any such arrangements they make.

Fares for Personal Care Attendants and Companions

When a personal care attendant (PCA) accompanies a complementary paratransit rider, the PCA must not be charged a fare. Transit agencies may charge a companion rider the same fare they charge the complementary paratransit rider, but a PCA must ride fare free. (See Circular Section **Error! Reference source not found.**.) The requirement for agencies to transport PCAs without charging a fare only applies to complementary paratransit and not to fixed-route or general public demand responsive services.

Negotiated Fares for Agency Trips

Social service agencies and other organizations often have responsibilities for client transportation, and some of their clients may be ADA paratransit eligible. FTA encourages transit agencies and social service agencies to enter into coordinated service arrangements for these trips in such arrangements. Social service agencies often pay transit agencies for providing their clients with guaranteed rides to their programs. When providing agency trips, § 37.131(c)(4) states that "the entity may charge a fare higher than otherwise permitted by this paragraph to a social service agency or other organization for agency trips (i.e., trips guaranteed to the organization)." In other words, the negotiated reimbursement is not subject to the maximum complementary paratransit fare of twice the fixed-route fare.

Appendix D to § 37.131 provides the following example:

> If an agency wants 12 slots for a trip to the mall on Saturday for clients with disabilities, the agency makes the reservation for the trips in its name, the agency will be paying for the transportation, and the trips are reserved to the agency, for whichever 12 people the agency designates, the provider may then negotiate any price it can with the agency for the trips.

Agency trips may also include services that exceed the complementary paratransit requirements, including dictated rather than negotiated pickup times, direct travel between origins and destinations with no intervening pickups or drop-offs, service to and from points outside of the complementary paratransit service area, or service to individuals who are not ADA paratransit eligible.

When complementary paratransit riders travel to or from a social service agency or a program, such trips are not necessarily "agency trips" unless these trips are prearranged and funded as agency trips. Similarly, the fact that a social service agency employee assists a rider in making a trip reservation does not make the trip an agency trip. Appendix D also states:

> We distinguish this situation from one in which an agency employee, as a service, calls and makes an individual reservation in the name of a client, where the client will be paying for the transportation.

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Appendix C: Section 37.121, Subpart F

FTA ADA REGULATIONS, GUIDANCE, AND PROCEDURES, SUBPART F-PARATRANSIT AS A COMPLEMENT TO FIXED-ROUTE SERVICE

Section 37.121 Requirement for comparable complementary paratransit service.

Except as provided in paragraph (c) of this section, each public entity operating a fixed-route system shall provide paratransit or other special service to individuals with disabilities that is comparable to the level of service provided to individuals without disabilities who use the fixed-route system.

To be deemed comparable to fixed-route service, a complementary paratransit system shall meet the requirements of Sec. 37.123-37.133 of this subpart. The requirement to comply with Sec. 37.131 may be modified in accordance with the provisions of this subpart relating to undue financial burden.

Requirements for complementary paratransit do not apply to commuter bus, commuter rail, or intercity rail systems.

Definition: Section 37.121 sets forth the basic requirement that all public entities who operate a fixed-route system have to provide paratransit service that is both comparable and complementary to the fixed-route service.

“Complementary” means service that acts as a “safety net” for individuals with disabilities who cannot use the fixed-route system. “Comparable” means service criteria of this subpart.

Paratransit may be provided by a variety of modes. Publicly operated dial-a-ride vans, service contracted out to a private paratransit provider, user-side subsidy programs, or any combinations of these and other approaches is acceptable. Entities who feel it necessary to apply for an undue financial burden waiver should be aware that one of the factors FTA will examine in evaluating waiver requests is efficiencies the provider could realize in its paratransit service. Therefore, it is important for entities in this situation to use the most economical and efficient methods of providing paratransit they can devise.

Section 37.129 Types of Service.
Except as provided in this section, complementary paratransit service for ADA paratransit eligible persons shall be origin-to-destination service.
Complementary paratransit service for ADA paratransit eligible persons described in Sec. 37.123(e)(2) of this part may also be provided by on-call bus service or paratransit feeder service to an accessible fixed-route, where such service enables the individual to use the fixed-route bus system for his or her trip.

Complementary paratransit service for ADA-eligible persons described in Sec. 37.123(e) (3) of this part also may be provided by paratransit feeder service to and/or from an accessible fixed-route.

Definition: Section 137.29 states that the basic mode of service for complementary paratransit is demand responsive, origin-to-destination service.
Section 37.131 Service criteria for complementary paratransit.

The following service criteria apply to complementary paratransit required by Section. 37.121 of this part.

(a) **Service Area**--(1) Bus. (i) The entity shall provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed-route. The corridor shall include an area with a three-fourths of a mile radius at the ends of each fixed-route.

(ii) Within the core service area, the entity also shall provide service to small areas not inside any of the corridors but which are surrounded by corridors.

(iii) Outside the core service area, the entity may designate corridors with widths from three-fourths of a mile up to one and one half miles on each side of a fixed-route, based on local circumstances.

(iv) For purposes of this paragraph, the core service area is that area in which corridors with a width of three-fourths of a mile on each side of each fixed-route merge together such that, with few and small exceptions, all origins and destinations within the area would be served.

Definition: The basic bus system service area is a corridor with a width of ¾ of a mile on each side of the fixed-route. At the end of a route there is a semicircular “cap” on the corridor, consisting of a three-quarter mile radius from the end point of the route to the parallel sides of the corridor.

Complementary paratransit must provide service to any origin or destination point within a corridor fitting this description around any route in the bus system.

(b) **Response time.** The entity shall schedule and provide paratransit service to any ADA paratransit eligible person at any requested time on a particular day in response to a request for service made the previous day. Reservations may be taken by reservation agents or by mechanical means

(1) The entity shall make reservation service available during at least all normal business hours of the entity's administrative offices, as well as during times, comparable to normal business hours, on a day when the entity's offices are not open before a service day.

(2) The entity may negotiate pickup times with the individual, but the entity shall not require an ADA paratransit eligible individual to schedule a trip to begin more than one hour before or after the individual's desired departure time.

(3) The entity may use real-time scheduling in providing complementary paratransit service.

(4) The entity may permit advance reservations to be made up to 14 days in advance of an ADA paratransit eligible individual's desired trips. When an entity proposes to change its reservations system, it shall comply with the public participation requirements equivalent to those of Sec. 37.137 (b) and (c).

Clarification for b, 2: Though an entity may negotiate with a rider to adjust pick-up and return trip times to make scheduling more efficient, the entity cannot insist on scheduling a trip more than one hour earlier or later than the individual desires to travel.

(c) **Fares.** The fare for a trip charged to an ADA paratransit eligible user of the complementary paratransit service shall not exceed twice the fare that would be charged to an individual paying full fare (i.e., without regard to discounts) for a trip of similar length, at a similar time of day, on the entity's fixed-route system.

(1) In calculating the full fare that would be paid by an individual using the fixed-route system, the entity may include transfer and premium charges applicable to a trip of similar length, at a similar time of day, on the fixed-route system.

(2) The fares for individuals accompanying ADA paratransit eligible individuals, who are provided service under Sec. 37.123 (f) of this part, shall be the same as for the ADA paratransit eligible individuals they are accompanying.

(3) A personal care attendant shall not be charged for complementary paratransit service.

(4) The entity may charge a fare higher than otherwise permitted by this paragraph to a social service agency or other organization for agency trips (i.e., trips guaranteed to the organization).

(d) **Trip purpose restrictions.** The entity shall not impose restrictions or priorities based on trip purpose.

(e) **Hours and days of service.** The complementary paratransit service shall be available throughout the same hours and days as the entity's fixed-route service.

(f) **Capacity constraints.** The entity shall not limit the availability of complementary paratransit service to ADA paratransit eligible individuals by any of the following:

- Restrictions on the number of trips an individual will be provided;

(2) Waiting lists for access to the service; or

(3) Any operational pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons.

(i) Such patterns or practices include, but are not limited to, the following:

(A) Substantial numbers of significantly untimely pickups for initial or return trips;

(B) Substantial numbers of trip denials or missed trips;

(C) Substantial numbers of trips with excessive trip lengths.

(ii) Operational problems attributable to causes beyond the control of the entity (including, but not limited to, weather or traffic conditions affecting all vehicular traffic that were not anticipated at the time a trip was scheduled) shall not be a basis for determining that such a pattern or practice exists.

Additional service. Public entities may provide complementary paratransit service to ADA paratransit eligible individuals exceeding that provided for in this section. However, only the cost of service provided for in this section may be considered in a public entity's request for an undue financial burden waiver under Sec. Sec. 37.151-37.155 of this part.

Clarification for f, 3, C: Since paratransit is a shared ride service, paratransit rides between Point A and Point B will usually take longer and involve more intermediate stops, than a taxi ride between the same two points. However, when the number of intermediate stops and the total trip time for a given passenger grows so large as to make use of the system prohibitively inconvenient, then this provision would be triggered.

Section 37.133 Subscription service.

(a) This part does not prohibit the use of subscription service by public entities as part of a complementary paratransit system, subject to the limitations in this section.

(b) Subscription service may not absorb more than fifty percent of the number of trips available at a given time of day, unless there is non-subscription capacity.

(c) Notwithstanding any other provision of this part, the entity may establish waiting lists or other capacity constraints and trip purpose restrictions or priorities for participation in the subscription service only.

Definition: As part of its paratransit service, an entity may include a subscription service component. However, at any given time of day this component may not absorb more than 50 percent of available capacity on the total system. For example, if at 8 a.m., the system can provide 400 trips, no more than 200 of these trips can be subscription.

For a complete list of ADA Regulations, Guidance, and Procedures please visit:

CFR 49 Part 37 – Transportation Service for Individuals with Disabilities

https://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/part-37-transportation-services-individuals-disabilities

Americans with Disabilities Act: Guidance (FTA ADA Circular

This circular provides guidance to recipients and subrecipients of Federal Transit Administration (FTA) financial assistance necessary to carry out provisions of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, as amended, and the U.S. Department of Transportation's implementing regulations at 49 CFR Parts 27, 37, 38, and 39.

https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/americans-disabilities-act-guidance-pdf

Appendix D: The Handi-Van Demand Projection

From: David Koffman [mailto:dkoffman@nelsonnygaard.com]
Sent: Friday, August 12, 2016 9:38 AM
To: Stoetzer, Eric H.; Phil McGuire
Subject: Revised Demand Projection

Hi Eric and Phil:
Here is a revised memo with the updated demand projections. As requested I used the FY 2016 actual results and extended the projections to FY 2022. There are small changes throughout, but here are what I think are the key paragraphs [page 4 of the memo] that you may find interesting:

> Note that FY 2016 has to be treated as a special case. Full-year ridership data was available, but without a detailed age breakdown. Therefore, as in the previous demand projection, only FY 2011 – FY 2015 were used to determine age-group trip rates, and only those years were used to determine how much faster demand would grow than expected from population growth alone, but this growth rate was applied to actual total ridership in FY 2016.
>
> Also, there was a significant improvement in ridership in FY 2016. By comparing actual FY 2016 ridership to the ridership that would have been expected based on the previous trend, we estimated that improved OTP produced a 3.5% increase in demand, which (using the formula for elasticity of demand with respect to on-time window) corresponds to a reduction in the effective on-time window from 45 minutes in FY 2015 to 42.8 minutes in FY 2016. This is consistent with reported OTP in FY 2016, which was 84% picked up between 10 minutes before and 30 minutes after the scheduled time. This estimated window was used as the baseline for computing the effect of further improvements in OTP in future years.

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Mobility | Accessibility | Sustainability

To:	Department of Transportation Services
From:	David Koffman
Subject:	Revised Handi-Van Demand Projection
Date:	August 12, 2016

DTS has requested a projection of demand for TheHandi-Van over the next six years. The demand projections are intended to test a number of policy options and to serve as a foundation for the short-range plan that is currently being prepared. The demand projections originally prepared in January 2016 have been updated to take advantage of full-year data for fiscal year 2015-16.

Assumptions for the Demand Projections

Review of demand over the past five years shows that actual ridership has grown by about 3% per year above and beyond what would be expected purely from population growth. We have assumed that this trend will continue if there are no changes in policy or service quality. Two changes have been discussed and have been tested in the projections. These are:

- An improvement in on-time performance (OTP). For purposes of the analysis, OTP is represented in terms of an "effective window." The effective window is a period of time during which a rider can generally count on being picked up. This could be thought of as "so many minutes before the scheduled time to so many minutes after" or just "so many minutes after the scheduled time." Either way, the rider experience is more or less the same. We have estimated that the effective on-time window was about 45 minutes up through FY 2015 and assume it will be reduced to about 30 minutes by 2019. There was a significant improvement in OTP in FY 2016, which appears to be associated with the notable increase in demand in the same year. The assumed OTP in each year is shown in Figure 1.
- An increase in fares from the current level of $2.00 per boarding up to an eventual level of $5.00, which would be twice the current fixed-route fare, i.e. the maximum allowed by the ADA regulations. It is assumed that the fare would be increased in small steps of $.50 per year beginning in FY 2018. This rate of increase would bring the Handi-Van fare to $4.50 per boarding in FY 2022, the end of the planning horizon. The assumed fare in each year is shown in Figure 2.

Figure 1 Assumptions for Improved On-time Performance

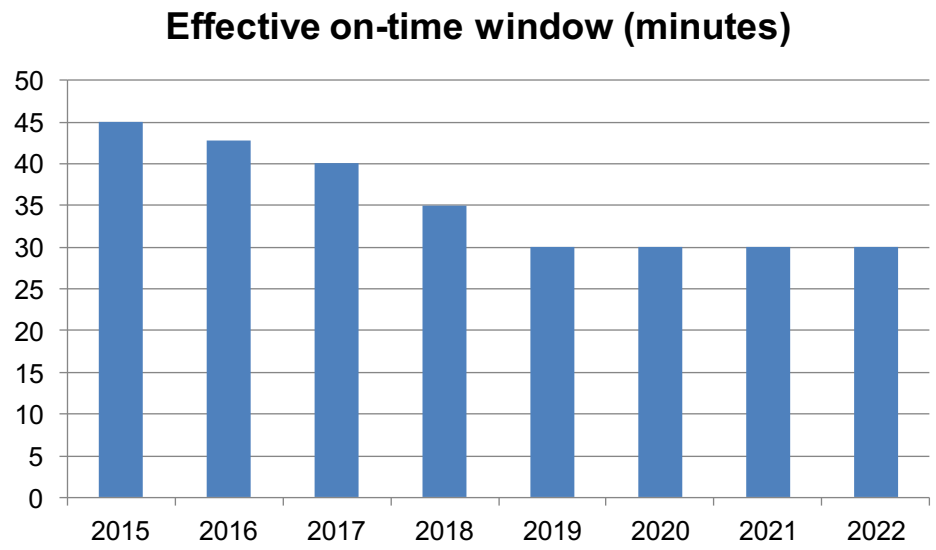
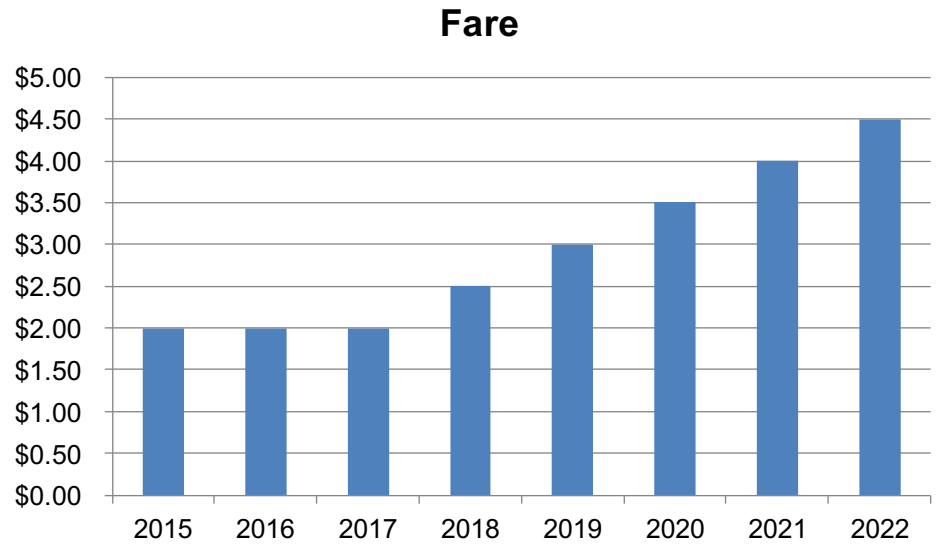


Figure 2 Assumptions for Fare Changes



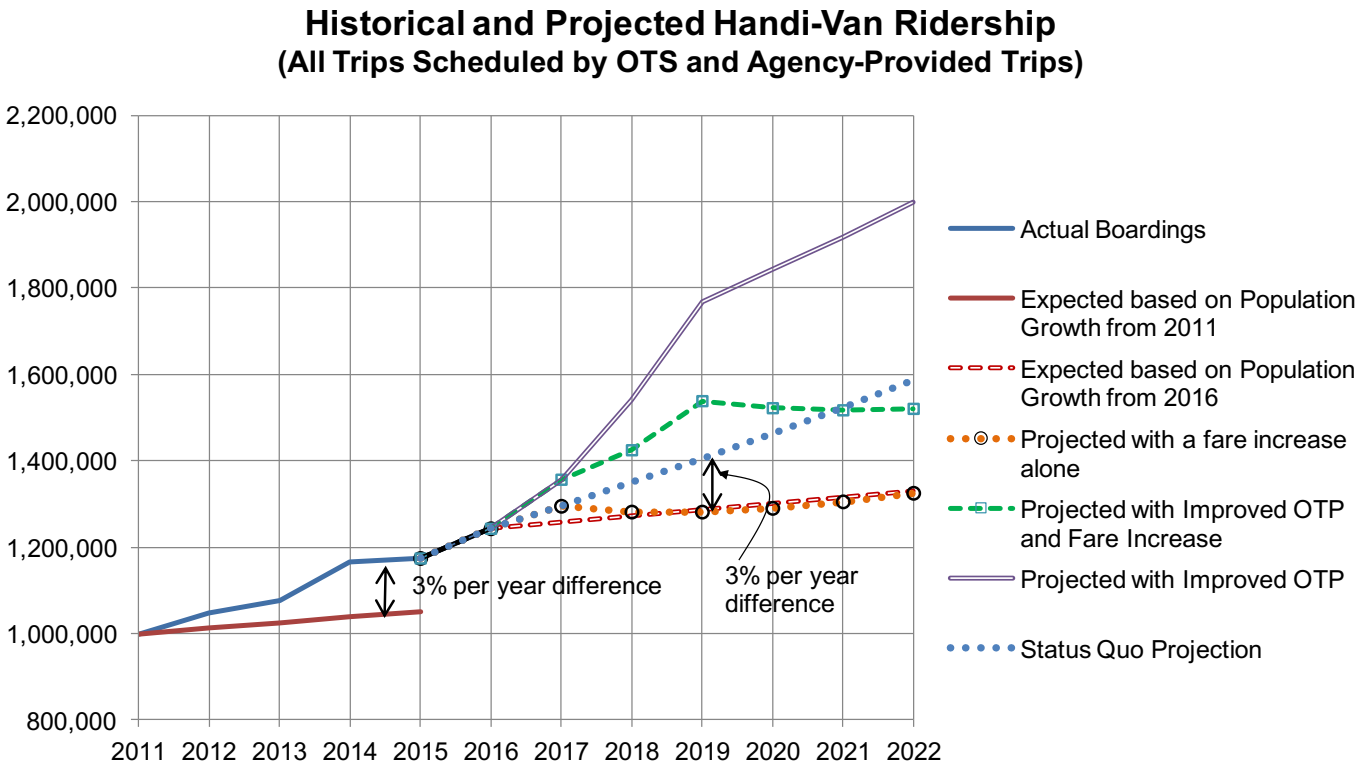
Demand Projections

Figure 3 shows demand projections for four options:

1. Status Quo, i.e. just based on population growth with no changes in fares or service quality.
2. Improvement in OTP, with no change in fares.
3. Improvement in OTP combined with an increase in fares.
4. A fare increase alone (no improvement in OTP)

The projections are for total boardings (including attendants and companions) for all trips scheduled by OTS, whether carried on OTS vans or supplementary providers, and trips carried by three agencies, Goodwill, Special Education Center of Hawaii (SECOH), and The Arc.

Figure 3



Methodology

The projections use the following methodology:

- If there is no change in on-time performance or fares, then trips for each age and sex group continue recent trends in comparison to their projected population. The improvement in OTP that was achieved in FY 2016 is retained. This "Status Quo" projection is explained in more detail below
- If OTP is improved, demand will increase compared to the Status Quo. For each 10% reduction in the effective window, demand is estimated to increase by 7.2%. This factor is equivalent to a so-called "elasticity" of demand with respect to on-time window of -0.72, which is the value that was estimated in a report by the Transit Cooperative Research Program comparing demand on 28 ADA paratransit services.[3]
- If fares are increased, demand will decrease compared to the Status Quo. If fares are increased in combination with improvements in OTP, then each 10% increase in fares is estimated to result in a 3% decrease in demand. This factor is equivalent to a price elasticity of -0.30, which is typical of results that have been found in recent studies of ADA paratransit services. If fares increase without any improvement in OTP, the effect of the fare increase would probably be more muted, since many of the trips that are no longer made as a result of higher fares would just be replaced by new trips that are currently discouraged as a result of perceived lack of capacity.

[3] *TCRP Report 119: Improving ADA Complementary Paratransit Demand Estimation*, 2007.

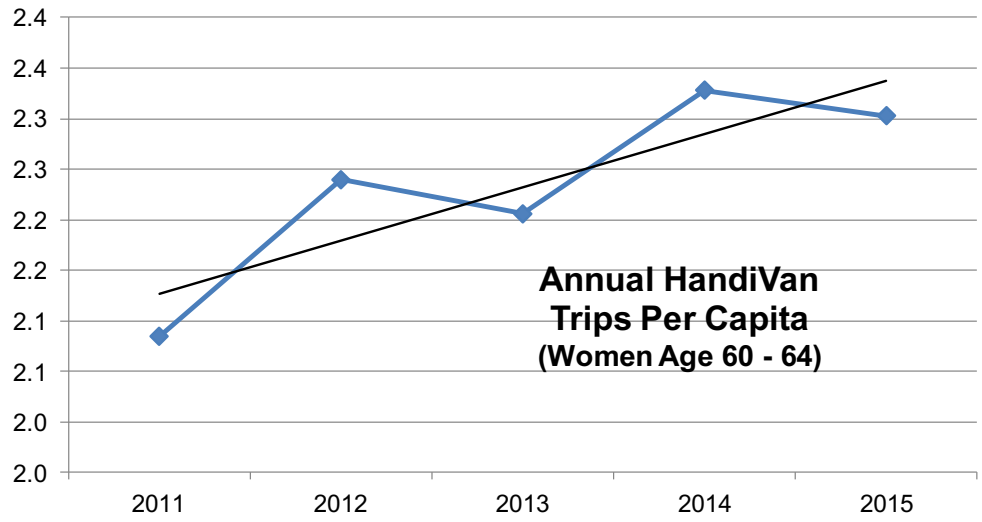
Here is more detail on how the Status Quo projections work. Demand is analyzed for each age and sex group. For example, consider women age 60 to 64:

1. The number of trips by women age 60 to 64 each year (and their PCAs and companions) in each year from FY 2011 to FY 2015 was estimated from the September trip listings provided by OTS and NTD ridership totals.
2. The population of women age 60 to 64 each year from FY 2011 to FY 2015 was estimated using data from the Hawaii Department of Business, Economic Development and Tourism (DBEDT).
3. A per capita trip rate was calculated for each year by dividing the estimated trips by the estimated population. A trendline is used to remove random fluctuation from the trip rates, and the position of the trendline for FY 2015 is used for a projection going forward. (This is shown in Figure 4 on the next page.)
4. The estimated FY 2015 per capita trip rate for women age 60 – 65 is applied to the estimated population of this age group in each year from FY 2016 to FY 2022, using data from DBEDT.
5. The procedure in Steps 1 – 3 is repeated for all age groups for women and men, and the ridership in each year is totaled. This produces the solid red line in Figure 3 called "Expected based on Population Growth from 2011." Starting in FY 2017, repeating the same procedure, but using 2016 as a baseline instead of FY 2011 (per Step 4), produces the hollow dashed line in Figure 3 called "Expected based on Population Growth from 2016.".
6. The difference between "Expected based on Population Growth from 2011" and the actual ridership for FY 2011 – FY 2015 (the solid blue line in Figure 1) was measured and determined to be 3% per year.
7. 3% per year is added to the "Expected based on Population Growth from 2016" series; the result is the dotted blue line in Figure 3 called "Status Quo."

Note that FY 2016 has to be treated as a special case. Full-year ridership data was available, but without a detailed age breakdown. Therefore, as in the previous demand projection, only FY 2011 – FY 2015 were used to determine age-group trip rates, and only those years were used to determine how much faster demand would grow than expected from population growth alone, but this growth rate was applied to actual total ridership in FY 2016.

Also, there was a significant improvement in ridership in FY 2016. By comparing actual FY 2016 ridership to the ridership that would have been expected based on the previous trend, we estimated that improved OTP produced a 3.5% increase in demand, which (using the formula for elasticity of demand with respect to on-time window) corresponds to a reduction in the effective on-time window from 45 minutes in FY 2015 to 42.8 minutes in FY 2016. This is consistent with reported OTP in FY 2016, which was 84% picked up between 10 minutes before and 30 minutes after the scheduled time. This estimated window was used as the baseline for computing the effect of further improvements in OTP in future years.

Figure 4 Trend in Handi-Van Trips per Capita



Discussion of the Results

Figure 3 shows the Status Quo projections and the result of the assumed OTP improvements and fare increases.

The projections indicate that improving OTP, with no fare change, would result in demand reaching about 2.0 million trips in FY 2022, an increase of about 61% compared to the level of about 1.2 million trips in FY 2016, and an increase of about 26% compared to the level of about 1.6 million trips projected for FY 2020 with no change in fares or service quality.

These projections assume that is it is actually possible to significantly improve OTP while accommodating a 61% increase in boardings. Practical limitations on the ability to procure and maintain additional vehicles, provide space to operate the vehicles, and hire and train additional drivers, could make it very difficult to do more than just accommodate the expected Status Quo growth. Without dramatically expanding operations, any influx of trips would cancel out attempted improvements in OTP. *As a result, the expected influx might never occur*.

As noted before, the calculations for a fare increase scenario assume that OTP improves. In this situation, the combined effect of improved OTP and higher fares is projected to result in a more modest increase in ridership compared to the Status Quo projection.

If, however, OTP does not improve (for example because operations do not expand to accommodate growth), then the fare increases would have reduced impact. For example, assuming no change in OTP, a -0.20 price elasticity instead of the -0.30 price elasticity assumed in Figure 3 might be appropriate. This would result in approximately flat ridership, with the fare increase cancelling expected Status Quo growth.

Projections for all the fare and OTP scenario combinations are shown in Figure 5.

Figure 5[1] Projected Handi-Van Boardings: Scenarios and Assumptions

	2016	2017	2018	2019	2020	2021	2022
Status Quo*	1,243,000	1,295,000	1,349,000	1,405,000	1,463,000	1,524,000	1,587,000
Improved OTP alone	1,243,000	1,356,000	1,540,000	1,769,000	1,843,000	1,919,000	1,998,000
Improved OTP and fare increase	1,243,000	1,356,000	1,425,000	1,538,000	1,522,000	1,517,000	1,520,000
Fare increase alone	1,243,000	1,295,000	1,281,000	1,281,000	1,290,000	1,305,000	1,325,000
Effective on-time window (mins.)	42.8**	40	35	30	30	30	30
Fare	$2.00	$2.00	$2.50	$3.00	$3.50	$4.00	$4.50

*Population Changes with No Change in Fares or Service Quality
**Estimated from ridership response to improved OTP from FY 2015.

[1]*Note: Trip projections shown in Figure 5 above differ from those in Figure ES1 on page 5 in the Executive Summary because the PGMS assumes the fare in 2022 remains constant at $4.00.*

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Appendix E: Agency Fleet Data

Figure 2.7 Agency Fleets

Goodwill			
Year	**Type**	**Fuel**	**QTY**
2000	Van	Gas	3
2008	Van	Gas	4
2013	Van	Gas	5
2014	Van	Gas	9
		TOTAL	**21**
The Arc			
Year	**Type**	**Fuel**	**QTY**
2001	Van	Gas	2
2002	Van	Gas	1
2005	Van	Gas	2
2006	Van	Gas	4
2007	Van	Gas	1
2012	Van	Gas	4
2013	Van	Gas	1
2014	Van	Gas	8
2014	Car	Gas	2
		TOTAL	**25**
SECOH			
Year	**Type**	**Fuel**	**QTY**
2011	Small Cutaway	Gas	1
2014	Small Cutaway	Gas	6
2015	Small Cutaway	Gas	1
		TOTAL	**8**

Source: NTD Report 2015

Goodwill rents many vehicles from vRide

Small cutaways are utilized by SECOH for its transportation program.

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Appendix F: Current Labor Status at OTS

The CBAs for TheHandi-Van are contracts between OTS and the Hawaii Teamsters and Allied Workers Local 996. Agreements between these two parties have been in place for many years and are renegotiated from time to time. There are a total of three separate agreements between OTS and the Teamsters relating to TheHandi-Van. Each agreement covers a different employee group. One agreement covers Paratransit Operators. Another covers Paratransit Dispatchers, Schedulers, Reservationists, Operations Clerks and Customer Service Clerks. The final agreement covers Maintenance Personnel. OTS has most recently entered into agreements for the drivers and operations staff (dispatchers, etc.) for the period beginning April 1, 2015, and ending March 31, 2020.

Key Collective Bargaining Agreement Provisions
A number of key provisions of the CBAs can have a significant impact on the future PGMS. Each of these provisions is reviewed here.

Driver Wages
Approximately 70% of TheHandi-Van expense is Personnel Cost. Of this, approximately 43% is driver's wages. This expense category alone is a major element of the cost of future paratransit services. The CBA sets forth the wage rates for the five-year period ending in March, 2020. The rate structure provides for an employee to receive a wage increase each year of employment through Year 5. At that point, the top wage rate is reached and the annual increases for longevity cease, capping the top rate based upon longevity. In addition to the wage increase based upon longevity, the entire wage scale is adjusted each year of the contract. This means that an individual who is a second year employee and moves to the third year wage rate based upon longevity after that second year also moves to the new wage scale for year two of the contract thus *obtaining two wage increases per year*. While the rate of increase varies slightly from step to step, the longevity increase ranges from 1.1% up to 1.8%. This is a $0.25 to $0.40 per hour step increase per year depending upon the step.

Similarly, the entire wage scale increases each year of the agreement. The increase for each step going from one year of the contract to the next ranges from 2.9% to 3.3%. The cumulative effect on many employees up through five years of employment is that they receive a step increase and a scale increase each year of employment. The combination of these two factors results in wage rate increases for a significant portion of the workforce of from 4.1% to 5.2% per year.

The impact on the cost projections in the PGMS is significant. Many planning processes simply start with a cost estimate for the base year and then project an "inflationary" increase each year going forward. In recent years, such an inflationary increase would typically be between 2% and 3% per year. However, making such a simple assumption with the presence of a labor agreement that already has larger wage increases for much of the workforce would underestimate the future cost projections.

Reservationists, Dispatchers, Schedulers, Operations Clerks, Customer Service Clerks Wages:
The approach to wages for these classifications differs somewhat from that of the drivers. With these positions there is not the same step increase process established as for drivers. Instead, only three steps are delineated in the agreement. These are: Probationary, Entry, and Maximum. Then, similar to the driver's agreement, this contract provides for annual adjustments to the wage scale. The general wage increase increment for year 1 is $.75 per hour with Years 2 through 5 increasing $.70 per hour each year. This increase equals between 3.1% and 3.6% per year depending upon the classification. With the set amounts established through the term of the agreement, the annual percentage increase declines very gradually through the term.

Employee Benefits
The various Collective Bargaining Agreements provide very ample benefit programs to all employees. Specific examples of the cost of these benefits are discussed in the following section entitled, "Overall OTS Employee Cost Issues."

Impact of Collective Bargaining Agreement Provisions
Certain provisions of the Collective Bargaining Agreements have a significant impact on operations. This goes beyond wage and benefit details and can affect management's flexibility to run day to day operations. Some key provisions are discussed below.

Relationship of Bargaining Agreements
In the paratransit industry it is common that the more technical job classifications such as Dispatchers and Schedulers be filled with former paratransit drivers. Often such a progression is seen as a promotional opportunity for individuals seeking higher skilled positions. Positions such as Dispatchers require significant technical training including on the use of the Trapeze scheduling software. Not only do positions such as Dispatcher and Scheduler require in-depth technical training regarding scheduling software, operating protocols, labor/management relationships, and customer service, but they also can benefit greatly from on-street operating experience.

The wage structure between positions is often established to encourage such movement. A skilled paratransit driver has become familiar with vehicle operations, use of on-board technology, communication protocols, in-service schedule adjustments, fare security, and other routine duties. These skills translate well to those needed to manage service from the office.

The present set of bargaining agreements establish a minimum 8.5% differential between similar steps in the scale between drivers and the more technical ranks of Dispatchers, Schedulers, and Operations Clerks. Reservationists and Customer Service Clerks are at somewhat lower scales reflecting the level of skill required for those positions by comparison. This means that drivers earn more than their office counterparts. The differential can be an impediment to recruiting drivers who have on-street operations experience into the technical support jobs. OTS reports that discussions are underway to address this differential in an effort to encourage drivers to apply for technical positions such as dispatch and scheduling. It is reported that very few drivers currently apply for such positions.

Labor/Management Relations

Labor relations can have a significant impact on the overall performance of a paratransit system. Day-to-day operations in a unionized environment require management skills and techniques that a non-union environment may not necessitate. TheHandi-Van has been unionized throughout its history, and certain strategies in the overall PGMS can be affected by the labor environment. Further, the ability to implement key strategies can be affected by the influence of labor.

The history of relations between OTS management and the Teamsters union includes a level of contention. Discussions with management suggest that the use of the grievance and arbitration process is a common method for addressing many business issues. Such a relationship between management and labor is not always the rule. Other paratransit operators have developed different relationships with their unions over the years and have achieved more collaborative approaches to addressing issues that can have a great impact on efficiency. Measures of this include the number of grievances filed by the union, the number that are taken to arbitration, and the outcome of the grievance or arbitration process in terms of which side prevailed. A very high number of grievances and arbitrations can point to the opportunity for improved relations between management and the union.

This relationship can be affected by the level of sophistication of the line level supervisors and staff in relating to labor contract administration. The OTS/Teamsters agreements are very complex contracts that require thorough knowledge by supervisors in routine administration. Actions taken on a day-to-day basis can contribute to the relation between employee groups. It is thus essential that all staff who make decisions that are guided by labor contract provisions have an intimate understanding of the agreement and their role in applying its provisions. At the time of adoption of each new bargaining agreement and periodically through its term, the staff should be thoroughly trained in administration of the contract. Thorough knowledge of the agreement can help to avoid decisions that can lead to grievances.

Similarly, it is important for management to establish its authority to run the operation and to make decisions within the limits of the agreement that are in the best interest of the riding public. Whether this affects the assignment of work or communication between employees and the riders or the inclusion of on-street employees in operating decisions, management should be able to maximize the efficiency and effectiveness of the system.

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